

The FARM ALMANAC 1920



THE AMERICAN AGRICULTURAL CHEMICAL COMPANY
BALTIMORE, MD.



THE FARM ALMANAC 1920



Published by

THE AMERICAN AGRICULTURAL CHEMICAL CO.

BALTIMORE SALES DEPARTMENT

Baltimore

Maryland

TO OUR CUSTOMERS AND FRIENDS

WE OFFER YOU, with our compliments, this almanac for the year 1920. We hope you will find it both helpful and interesting.

Many who receive this almanac will be familiar with some of the AA QUALITY brands of fertilizers. We trust those who are not familiar with these brands will give them a trial the coming season.

The best evidence of what AA QUALITY fertilizers will do lies in the actual results they have produced in the field. We therefore reproduce a few photographs which will give you some idea of the benefit farmers are deriving from the use of our high-grade fertilizers. If you do not use AA QUALITY fertilizers, we should like to have you ask your friends and acquaintances, who do, what they think of them.

Only a few of the many brands we manufacture are referred to in this almanac. We have a large number of other brands, since we make a specialty of manufacturing fertilizers especially adapted to different crops. In order to learn the best formulas and the most suitable ingredients for use on special crops we have spared no trouble or expense in our laboratories or at our experimental farms.

We have exceptional facilities for rendering you service. Our organization is among the largest and best equipped in the fertilizer business. You will note on other pages a list of sales offices and factories as well as photographs of a few of our nearby plants. These will give you some idea of the immensity of our organization and of our ability to serve you.

Factory and Sales Service

THE AMERICAN AGRICULTURAL CHEMICAL COMPANY

29 PRINCIPAL FACTORIES AND WAREHOUSES

22 LEADING SALES AND EXECUTIVE OFFICES

	Sales and Executive Offices	Factories and Warehouses
NEW ENGLAND	Boston, Mass. Rutland, Vt.	Houlton, Me. Searsport, Me. North Weymouth, Mass.
NORTH ATLANTIC STATES	New York, N. Y. Baltimore, Md. Buffalo, N. Y. Philadelphia, Pa. Alexandria, Va. Norfolk, Va.	Baltimore, Md. Bayway, N. J. Carteret, N. J. Newark, N. J. Brooklyn, N. Y. Green Point, L. I., N. Y. Rochester, N. Y. Philadelphia, Pa. Alexandria, Va. Norfolk, Va. Buffalo, N. Y.
SOUTH ATLANTIC STATES	Jacksonville, Fla. Savannah, Ga. Greensboro, N. C. Henderson, N. C. Wilmington, N. C. Charleston, S. C. Columbia, S. C. Spartanburg, S. C.	Jacksonville, Fla. Atlanta, Ga. Savannah, Ga. Greensboro, N. C. Wilmington, N. C. Charleston, S. C. Columbia, S. C. Spartanburg, S. C.
GULF STATES	Montgomery, Ala.	Montgomery, Ala. Pensacola, Fla.
MIDDLE WEST STATES	Detroit, Mich. St. Louis, Mo. Cincinnati, Ohio Cleveland, Ohio	Detroit, Mich. St. Louis, Mo. Cincinnati, Ohio Cleveland, Ohio
PACIFIC COAST	Los Angeles, Cal.	Los Angeles, Cal.
EXPORT DEPT.,	2 Rector Street, New York, N. Y.	
CUBA	National Bank Building, Havana	

AGRICULTURAL SERVICE BUREAU

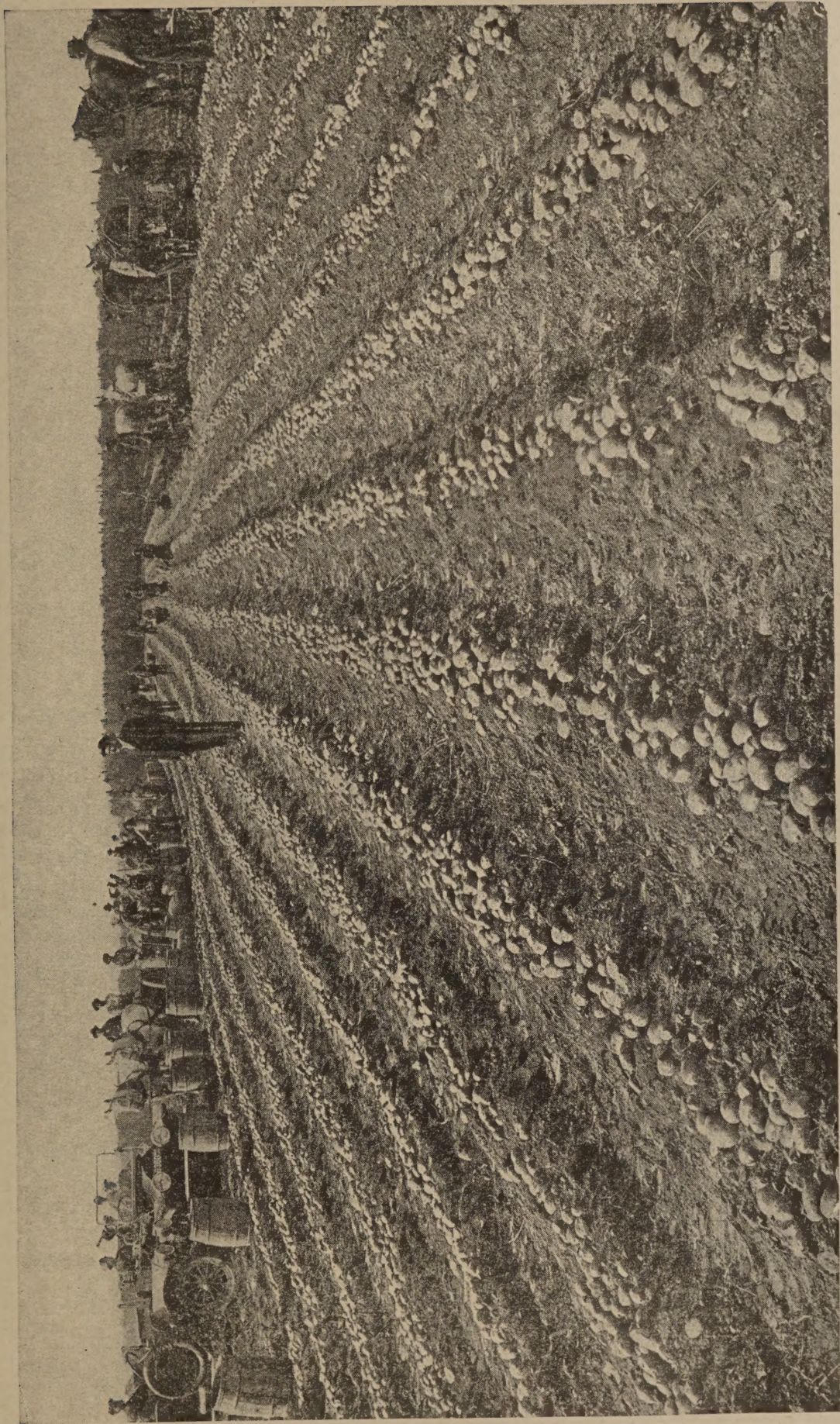
Supplying scientific information on crops, soils
and fertilizers, 92 State Street, Boston, Mass.





MOON'S PHASES										LATITUDE				LATITUDE			
										Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon				Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.			
										SUN SLOW				SUN SLOW			
										Sun rises H. M.				Sun sets H. M.			
										Moon sets H. M.				Moon sets H. M.			
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January—1, 2, fair; 3, 4, stormy, snow or rain; 5, 6, rough; 7, 8, rain or snow; 9, 10, fair; 11, 12, rainy; 13, 14, 15, fair; 16, 17, 18, cloudy and rain; 19, fair; 20, 21, unsettled; 22, 23, 24, rain or snow; 25, 26, fair; 27, rain; 28, fair; 29, snow; 30, fair; 31, rain.



554 Bushels per acre. Record yields of potatoes are produced by heavy applications of commercial fertilizers coupled with careful cultivation and spraying.



MOON'S PHASES												
	BOSTON			NEW YORK			CHICAGO					
	D.	H.	M.	D.	H.	M.	D.	H.	M.			
F. M.	4	3	42	M.	4	3	42	M.	4	2	42	M.
L. Q.	11	3	49	A.	11	3	49	A.	11	2	49	A.
N. M.	19	4	35	A.	19	4	35	A.	19	3	35	A.
F. Q.	26	6	49	A.	26	6	49	A.	26	5	49	A.
D.	D.	Historical Events.										
M.	W.											

LATITUDE		LATITUDE	
Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon.		Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.	
Sun rises	Sun sets	Moon sets	
H. M.	H. M.	H. M.	

MOON'S SIGNS		SUN SLOW	
H. M.	H. M.	H. M.	M.

5. Septuagesima Sunday. Matt. 20. 9h. 57m. Day's Length, 10h. 4m.																
1	S	☾ in perigee	☾	7	16	5	13	4	41	14	7	12	5	16	4	36
2	M	Purification—Candlemas	☾	7	15	5	14	5	33	14	7	11	5	17	5	29
3	Tu	☾ ☽ ☉: ☽ ☽ ☾	☾	7	14	5	15	6	18	14	7	10	5	18	6	15
4	W	☾ 4th. ☽ ☽ ☾	☾	7	13	5	16	rises		14	7	9	5	20	rises	
5	Th	☽ ☽ ☉ superior	☾	7	11	5	18	7	14	14	7	8	5	21	7	15
6	Fr	☽ gr. hel. lat. S. ☽ ☽ ☾	☾	7	10	5	19	8	21	14	7	7	5	22	8	21
7	Sa	☾ gr. libration W.	☾	7	9	5	20	9	26	14	7	6	5	23	9	25

6. Sexagesima Sunday. Luke 8 10h. 13m. Day's Length, 10h. 20m.																
8	S	Steamer Mantola sunk, 1917	☾	7	8	5	21	10	29	14	7	5	5	25	10	27
9	M	Gen. Bern. Reyes slain, 1913	☾	7	7	5	23	11	30	14	7	4	5	26	11	27
10	Tu	☾ ☽ ☾	☾	7	6	5	24	morn		14	7	2	5	27	morn	
11	W	☾ 11th. ☾ in ☾	☾	7	4	5	25	0	29	14	7	1	5	28	0	25
12	Th	Germans defeat Russians, 1915	☾	7	3	5	27	1	26	14	7	0	5	29	1	22
13	Fr	☾ in apogee	☾	7	2	5	28	2	19	14	6	59	5	31	2	14
14	Sa	St. Valentine's Day. ☽ ☽ ☽	☾	7	0	5	29	3	9	14	6	58	5	32	3	4

7. Quinquagesima Sunday. Luke 18 10h. 33m. Day's Length, 10h. 37m.																
15	S	Battleship Maine destro'd, 1898	☾	6	58	5	31	3	55	14	6	56	5	33	3	50
16	M	☽ ☽ ☾. Jay Cooke died, 1905	☾	6	58	5	32	4	37	14	6	55	5	34	4	33
17	Tu	British Victory on Tigris, 1917	☾	6	56	5	33	5	15	14	6	53	5	36	5	11
18	W	Ash Wednesday	☾	6	55	5	34	5	47	14	6	53	5	37	5	44
19	Th	☾ 19th. ☽ ☽ ☾	☾	6	54	5	36	sets		14	6	51	5	38	sets	
20	Fr	☽ ☽ ☾	☾	6	52	5	37	6	49	14	6	50	5	39	6	49
21	Sa	☽ ☽ ☉. Card Newman b. 1801	☾	6	51	5	38	7	55	14	6	48	5	40	7	54

8. 1st Sunday in Lent. Matt. 4 10h. 50m. Day's Length, 10h. 55m.																
22	S	George Washington born, 1732	☾	6	49	5	39	9	3	14	6	47	5	42	9	1
23	M	John Q. Adams died, 1848	☾	6	48	5	41	10	12	14	6	45	5	43	10	9
24	Tu	St. Matthias	☾	6	46	5	42	11	21	14	6	44	5	44	11	17
25	W	Ember Day. ☽ in ☾: ☽ in ☽	☾	6	45	5	43	morn		13	6	43	5	45	morn	
26	Th	☾ 26th. C. Rhodes d., 1902	☾	6	43	5	44	0	29	13	6	41	5	46	0	25
27	Fr	Ember Day. ☽ ☽ ☉	☾	6	42	5	46	1	33	13	6	40	5	48	1	28
28	Sa	Ember Day. ☾ in perigee	☾	6	40	5	47	2	32	13	6	38	5	49	2	27

9. 2d Sunday in Lent. Matt. 15 11h. 10m. Day's Length, 11h. 13m.																
29	S	☽ in perihelion	☾	6	38	5	48	3	25	13	6	37	5	50	3	21

February—1, 2, fair; 3, rain or snow; 4, 5, 6, fair and cold; 7, 8, 9, unsettled; 10, 11, 12, snowy; 13, 14, 15, fair; 16, 17, 18, rainy; 19, 20, fair; 21, 22, cloudy and rain; 23, 24, 25, fair; 26, 27, rain or snow; 28, 29, fair.

FARM DIARY



MOON'S PHASES										LATITUDE			LATITUDE						
			BOSTON			NEW YORK			CHICAGO			Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon			Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.				
F. M.	D.	H. M.	A.	D.	H. M.	A.	D.	H. M.	A.	Sun rises	Sun sets	Moon sets	SUN SLOW	Sun rises	Sun sets	Moon sets			
N. Q.	12	0	57	A.	12	0	57	A.	12	11	57	M.							
L. M.	20	5	56	M.	20	5	56	M.	20	4	56	M.							
F. Q.	27	1	45	M.	27	1	45	M.	27	0	45	M.							
D. M.	D. W.	Historical Events.										MOON'S SIGNS			SUN SLOW				
1	M	St. David										☾	6 37	5 49	4 12	12	6 35	5 51	4 8
2	Tu	♂ ♀ ☾: ♂ ♀ ☾										☾	6 35	5 51	4 52	12	6 34	5 52	4 49
3	W	♂ gr. elong. E., 18° 12'										☾	6 34	5 52	5 27	12	6 32	5 53	5 25
4	Th	☾ 4th. ♂ ♀ ☾										☾	6 32	5 53	rises	12	6 31	5 54	rises
5	Fr	☾ gr. libration W.										☾	6 30	5 54	7 7	12	6 29	5 55	7 6
6	Sa	Gen. Phil. H. Sheridan b., 1831										☾	6 28	5 55	8 11	11	6 28	5 56	8 9
10. 3d Sunday in Lent. Luke 11 11h. 30m. Day's Length, 11h. 31m.																			
7	S	L. Burbank born, 1849										☾	6 27	5 57	9 14	11	6 26	5 57	9 11
8	M	♂ ♀ ☾. Paul L. Ford d., 1902										☾	6 25	5 58	10 15	11	6 24	5 59	10 12
9	Tu	☾ in ♍. Ed. J. Phelps d., 1900										☾	6 24	5 59	11 13	11	6 23	6 0	11 9
10	W	♂ stationary: ♂ gr. hel. lat. N.										☾	5 22	6 0	morn	10	6 21	6 1	morn
11	Th	☾ Bagdad captured, 1917										☾	6 20	6 1	0 8	10	6 19	6 2	0 4
12	Fr	12th. ♂ ♀ ☾: ☾ in apogee										☾	6 18	6 2	0 59	10	6 18	6 3	0 54
13	Sa	Ger. Troops enter Odessa, 1918										☾	6 17	6 4	1 47	10	6 16	6 4	1 42
11. 4th Sunday in Lent. John 6 11h. 50m. Day's Length, 11h. 50m.																			
14	S	♂ stationary										☾	6 15	6 5	2 30	9	6 15	6 5	2 26
15	M	Czar of Russia abdicated, 1917										☾	6 13	6 6	3 10	9	6 13	6 6	3 6
16	Tu	James Madison born, 1751										☾	6 12	6 7	3 46	9	6 11	6 7	3 43
17	W	St. Patrick ☾ gr librat. E.										☾	6 10	6 8	4 18	8	6 10	6 8	4 16
18	Th	♂ ♀ ☾: ♂ ♀ ☾										☾	6 8	6 9	4 48	8	6 8	6 9	4 47
19	Fr	Wm. J. Bryan born, 1860										☾	6 6	6 10	5 19	8	6 6	6 11	5 19
20	Sa	20th Spring begins										☾	6 5	6 12	sets	8	6 5	6 12	sets
12. 5th Sunday in Lent. John 8 12h. 10m. Day's Length, 12h. 10m.																			
21	S	♂ ♀ ☾. Gen. Johnston d., 1891										☾	6 3	6 13	7 59	7	6 3	6 13	7 57
22	M	Przemysl surrendered, 1915										☾	6 1	6 14	9 10	7	6 1	6 14	9 7
23	Tu	☾ in ♍. Dr Peebles b., 1822										☾	5 59	6 15	10 20	7	6 0	6 15	10 16
24	W	☾ in perigee										☾	5 58	6 16	11 26	6	5 58	6 16	11 21
25	Th	Annunciation										☾	5 56	6 17	morn	6	5 56	6 17	morn
26	Fr	☾ Flood in Ohio. 1913										☾	5 54	6 18	0 27	6	5 55	6 18	0 22
27	Sa	27th. Ger. take Albert, 1918										☾	5 52	6 19	1 22	5	5 53	6 19	1 18
13. Palm Sunday. Matt. 27 12h. 29m. Day's Length, 12h. 29m.																			
28	S	Palm Sunday										☾	5 51	6 20	2 10	5	5 51	6 20	2 6
29	M	♂ ♀ ☾: ♂ ♀ ☾										☾	5 49	6 22	2 50	5	5 50	6 21	2 47
30	Tu	Alaska purchased, 1867										☾	5 47	6 23	3 26	5	5 48	6 22	3 24
31	W	♀ in aphelion: ♂ ♀ ☾										☾	5 45	6 24	3 59	4	5 46	6 23	3 58

March—1, cloudy and damp; 2, 3, fair; 4, 5, 6, rainy; 7, stormy; 8, rainy; 9, fair; 10, 11, 12, rainy; 13, fair; 14, 15, rainy; 16 to 19, fair; 20, 21, 22, rainy; 23, 24, fair; 25, 26, 27, rainy; 28, 29, fair; 30, 31, cloudy and rainy.

USEFUL INFORMATION

One thousand shingles, laid four inch to the weather, will cover one hundred square feet of surface, and five pounds of shingle nails will fasten them on.

One-fifth more siding and flooring is needed than the number of square feet of surface to be covered because of the lap in siding and flooring.

One thousand laths will cover seventy yards of surface and eleven pounds of lath nails will nail them on.

Eight bushels of good lime, sixteen bushels of sand and one bushel of hair will make enough good mortar to plaster 100 square yards.

One cord of stone, three bushels of lime and a cubic yard of sand will lay one hundred cubic feet of wall.

Cement one bushel, and sand two bushels, will cover $3\frac{1}{2}$ square yards, one inch thick; $4\frac{1}{2}$ square $\frac{3}{4}$ inch thick, and $6\frac{3}{4}$ square yards $\frac{1}{2}$ inch thick.

One bushel of cement and one bushel of sand will cover $2\frac{1}{4}$ square yards one inch thick; 3 square yards $\frac{3}{4}$ inch thick, and $4\frac{1}{2}$ square yards $\frac{1}{2}$ inch thick.

Amount of Paint Required for a Given Surface

It is impossible to give a rule that will apply in all cases, as the amount varies with the kind and the thickness of the paint, the kind of wood or other material to which it is applied, the age of the surface, etc. The following is an approximate rule: Divide the number of square feet of surface by 200. The result will be the number of gallons of liquid paint required to give two coats, or, divide by 18 and the result will be the number of pounds of pure ground white lead required to give three coats.

Strength of Belt Leather

The tensile strength of good ox hide, well-tanned, has been carefully examined, with the following results:

The solid leather will sustain, per inches of width, 675 pounds.

At the rivet-holes of the splices, per inches of width, 382 pounds.

At the lacing, per inches of width, 210 pounds.

Safe working tension, per inches of width, 55 pounds.

The belts are assumed to be three-sixteenths of an inch thick.

Painter, Glazier and Paperhanger

One pound of paint will cover

about four superficial yards the first coat, and about six yards each additional coat.

About one pound of putty for stopping will be required for every twenty yards.

One gallon of tar and one pound of pitch will cover about twelve yards superficial the first coat, and about seventeen yards each additional coat.

Brief Business Laws

If a note is lost or stolen, it does not release the maker; he must pay it if the consideration for which it was given and the amount can be proven.

Notes bear interest only when so stated.

Principals are responsible for the acts of their agents.

Each individual in a partnership is responsible for the whole amount of the debts of the firm, except in cases of a special partnership. The word "limited" in connection with a firm name indicates that a limitation of responsibility for each member is fixed.

Ignorance of the law excuses no one.

An agreement without consideration of value is void.

A note made on a Sunday is void; also one dated ahead of its issue. It may be dated back at pleasure.

Contracts made on a Sunday cannot be enforced.

A note by a minor is void in some states, and in others it is voidable on judicial decision.

A contract made with a minor, or a lunatic, is void.

A note obtained by fraud or from a person in a state of intoxication cannot be collected. It is a fraud to conceal a fraud. Signatures made with a lead pencil are good in law. The acts of one partner bind the rest.

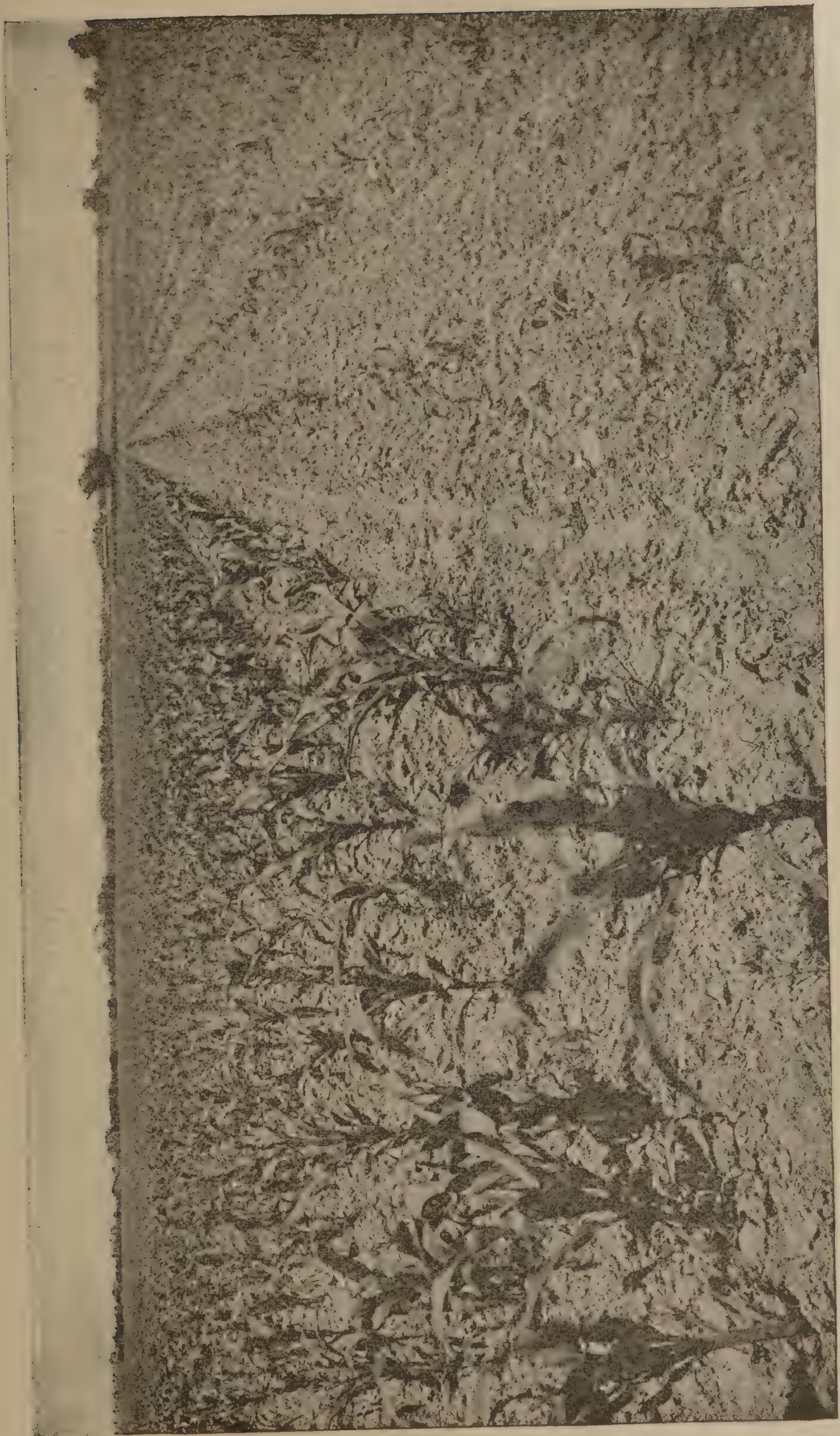
"Value received" is usually written in a note, and should be, but it is not necessary. If not written, it is presumed by the law or may be supplied by proof.

The maker of an "accommodation" bill or note (one for which he had received no consideration), having lent his name or credit for the benefit of the holder, is not bound to the person accommodated, but is bound to all other parties, precisely as if there were a good consideration.



MOON'S PHASES										MOON'S SIGNS	LATITUDE			SUN SLOW	LATITUDE		
BOSTON			NEW YORK			CHICAGO			Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon			Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.					
D.	H.	M.	D.	H.	M.	D.	H.	M.									
F. M.	3	5 55	M.	3	5 55	M.	3	4 55									
L. Q.	11	8 24	M.	11	8 24	M.	11	7 24									
N. M.	18	4 43	A.	18	4 43	A.	18	3 43									
F. Q.	25	8 27	M.	25	8 27	M.	25	7 27									
D.	D.	Historical Events.								Sun rises	Sun sets	Moon sets	SUN SLOW	Sun rises	Sun sets	Moon sets	
M.	W.									H. M.	H. M.	H. M.	M.	H. M.	H. M.	H. M.	
1	Th	♂ stationary								5 44	6 25	4 30	4	5 45	6 24	4 30	
2	Fr	 Good Friday								5 42	6 26	5 0	4	5 43	6 25	5 1	
3	Sa	 3d. ♂ in ♀: ♄ stat.								5 40	6 27	rises	3	5 41	6 26	rises	
14. Easter Sunday. John 20 12h. 49m. Day's Length, 12h. 47m.																	
4	S	Easter Sunday. ♂ ♀ ♀								5 39	6 28	8 1	3	5 40	6 27	7 58	
5	M	♂ ♂ ♄: ♄ in ♀								5 37	6 30	9 1	3	5 38	6 28	8 57	
6	Tu	U. S. decl'd War on Ger., 1917								5 35	6 31	9 58	2	5 36	6 29	9 54	
7	W	Cuba decl'd War on Ger., 1917								5 33	6 32	10 51	2	5 35	6 30	10 46	
8	Th	♄ in apogee								5 32	6 33	11 40	2	5 33	6 31	11 35	
9	Fr	Empress of Japan died, 1914								5 30	6 34	morn	2	5 32	6 32	morn	
10	Sa	British Victory at Arras, 1917								5 28	6 35	0 25	1	5 30	6 33	0 21	
15. Low Sunday. John 20 13h. 9m. Day's Length, 13h. 6m.																	
11	S	 11th. Civil War began, 1861								5 27	6 36	1 5	1	5 28	6 34	1 1	
12	M	 Henry Clay born, 1777								5 25	6 37	1 41	1	5 27	6 36	1 38	
13	Tu	♂ in aphelion								5 23	6 38	2 15	1	5 25	6 37	2 12	
14	W	♂ ♂ ♄. Hor. Bushnell b., 1802								5 22	6 40	2 46	0	5 24	6 38	2 44	
15	Th	Steamer Titanic sank, 1912								5 20	6 41	3 16	0	5 22	6 39	3 15	
16	Fr	♂ ♀ ♄: ♀ gr. elong. W., 27° 31'								5 19	6 42	3 46	f.	5 21	6 40	3 46	
17	Sa	♂ ♀ ♄. J. P. Morgan b., 1837								5 17	6 43	4 18	0	5 19	6 41	4 19	
16. 2d Sunday after Easter. John 10 13h. 29m. Day's Length, 13h. 24m.																	
18	S	 18th. C. M. Schwabb, 1862								5 15	6 44	sets	1	5 18	6 42	sets	
19	M	 ♄ stat.: ♂ ♄ ♄: ♄ in ♀								5 14	6 45	8 0	1	5 16	6 43	7 56	
20	Tu	♄ in perigee								5 12	6 46	9 12	1	5 15	6 44	9 8	
21	W	♂ ♂ ♄. F. Froebel born, 1782								5 11	6 47	10 18	1	5 13	6 45	10 13	
22	Th	♀ gr. hel. lat. S.								5 9	6 48	11 16	2	5 12	6 46	11 11	
23	Fr	St. George								5 8	6 50	morn	2	5 10	6 47	morn	
24	Sa	Revolution in Dublin, 1916								5 6	6 51	0 7	2	5 9	6 48	0 3	
17. 3d Sunday after Easter. John 16 13h. 47m. Day's Length, 13h. 41m.																	
25	S	 25th. St. Mark. ♂ ♄ ♄								5 5	6 52	0 51	2	5 8	6 49	0 48	
26	M	 Wilkes Booth killed, 1865								5 3	6 53	1 29	2	5 6	6 50	1 27	
27	Tu	♂ ♄ ♄: ♂ nearest ⊕								5 2	6 54	2 2	2	5 5	6 51	2 0	
28	W	♄ gr. libration W.								5 0	6 55	2 32	3	5 3	6 52	2 31	
29	Th	□ ♄ ⊙: □ ♄ ⊙								4 59	6 56	3 1	3	5 2	6 53	3 1	
30	Fr	Irish Revol. suppressed, 1916								4 58	6 57	3 31	3	5 1	6 54	3 32	

April—1, 2, 3, fair and windy; 4, showers; 5, fair; 6, 7, rain and cold; 8, 9, 10, fair; 11, 12, 13, rainy; 14 to 18, partly cloudy; 19, 20, 21, fair; 22, 23, rainy; 24, 25, 26, fair; 27, 28, 29, rain; 30, fair.



A field of corn in Audrain County, Missouri. Fertilized at the left; unfertilized at the right. Fertilizer gives the corn an early start, increases yields and hastens maturity.



MOON'S PHASES						LATITUDE						LATITUDE					
BOSTON			NEW YORK			CHICAGO			MOON'S SIGNS	Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon			SUN EAST	Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.			
F. M.	D. H. M.	A.	F. M.	D. H. M.	A.	F. M.	D. H. M.	A.		Sun rises H. M.	Sun sets H. M.	Moon sets H. M.		Sun rises H. M.	Sun sets H. M.	Moon sets H. M.	
2	8 47	A.	2	8 47	A.	2	7 47	A.									
L. Q.	11 0 51	M.	11 0 51	M.		10 11 51	A.										
N. M.	18 1 25	M.	18 1 25	M.		18 0 25	M.										
F. Q.	24 4 7	A.	24 4 7	A.		24 3 7	A.										
D. M.	D. W.	Historical Events.															
1	Sa	Sts. Philip and James. ☿♂♂				♈	4 56	6 59	4 1	3	4 59	6 55	4 3				
18. 4th Sunday after Easter. John 16 14h. 4m. Day's Length, 13h. 58m.																	
2	S	2d. A. W. Tourgee b., 1838				♈	4 55	6 59	4 33	3	4 58	6 56	4 36				
3	M	♈ in ♍				♈	4 53	7 1	rises	3	4 57	6 57	rises				
4	Tu	♂ gr. hel. lat. S.				♈	4 52	7 2	8 43	3	4 56	6 58	8 39				
5	W	Earthq. in Costa Rica, 1910 ♍				♈	4 51	7 3	9 34	3	4 54	6 59	9 29				
6	Th	♈ in apogee				♈	4 49	7 4	10 20	3	4 53	7 0	10 15				
7	Fr	♂ stationary				♈	4 48	7 5	11 2	4	4 52	7 2	10 58				
8	Sa	Eruption of Mt. Pelee, 1902				♈	4 47	7 6	11 39	4	4 51	7 3	11 35				
19. Rogation Sunday. John 16 14h. 21m. Day's Length, 14h. 14m.																	
9	S	Earthquake in Italy, 1914				♈	4 46	7 7	morn	4	4 50	7 4	morn				
10	M	10th. Lil. Nordica d. 1914				♈	4 45	7 8	0 13	4	4 49	7 5	0 10				
11	Tu	11th. Minnesota adm. 1858				♈	4 43	7 9	0 44	4	4 47	7 6	0 42				
12	W	♂♂♂. U. P. Ry. opened, 1869				♈	4 42	7 10	1 14	4	4 46	7 7	1 13				
13	Th	Ascension Day. ☿♂♀				♈	4 41	7 12	1 44	4	4 45	7 8	1 44				
14	Fr	Fire in Montreal, 1910				♈	4 40	7 13	2 14	4	4 44	7 9	2 15				
15	Sa	Standard Oil Co. dissolved, 1911				♈	4 39	7 14	2 47	4	4 43	7 9	2 49				
20. Sunday after Ascension. John 15-16 14h. 37m. Day's Length, 14h. 28m.																	
16	S	Mafeking relieved, 1900				♈	4 38	7 15	3 24	4	4 42	7 10	3 27				
17	M	♂♀♂: ☿♂♂: ♈ in ♍				♈	4 37	7 16	4 5	4	4 42	7 11	4 9				
18	Tu	18th. Draft Act sign., 1917				♈	4 36	7 17	sets	4	4 41	7 12	sets				
19	W	♈ in perigee				♈	4 35	7 18	9 4	4	4 40	7 13	8 59				
20	Th	Cuban Republic inaug., 1902				♈	4 34	7 19	10 1	4	4 39	7 14	9 57				
21	Fr	Conflagration in Atlanta, 1917				♈	4 33	7 20	10 48	4	4 38	7 15	10 44				
22	Sa	♂Ψ♂. Ed. Bellamy d., 1898				♈	4 32	7 21	11 28	4	4 37	7 16	11 25				
21. Pentecost—Whit Sunday. John 14 14h. 50m. Day's Length, 14h. 41m.																	
23	S	Pentecost Sunday. ☿♂♂				♈	4 32	7 22	morn	3	4 36	7 17	morn				
24	M	24th. ☿♂♂				♈	4 31	7 23	0 4	3	4 36	7 18	0 2				
25	Tu	♂♂♂ superior				♈	4 30	7 24	0 36	3	4 35	7 18	0 35				
26	W	Ember Day. ☐♂♂: ☐♂♂				♈	4 29	7 24	1 6	3	4 34	7 19	1 6				
27	Th	♂ in perihelion: ♀ in ♍				♈	4 28	7 25	1 35	3	4 34	7 20	1 36				
28	Fr	Ember Day. ☿♂♂				♈	4 28	7 26	2 4	3	4 33	7 21	2 6				
29	Sa	Ember Day				♈	4 28	7 27	2 35	3	4 33	7 22	2 38				
22. Trinity Sunday. John 3 15h. 1m. Day's Length, 14h. 51m.																	
30	S	Trinity Sun. Memorial Day				♈	4 27	7 28	3 9	3	4 32	7 23	3 13				
31	M	Great Naval Battle, 1916				♈	4 26	7 29	3 45	3	4 32	7 23	3 49				

May—1 to 7, generally fair; 8, 9, rainy; 10 to 14, fair; 15, 16, unsettled; 17, 18, rain; 19, 20, fair; 21 to 24, rainy; 25, 26, fair; 27, 28, showers; 29, 30, 31, fair.

Lumber Table

Lengths in Feet

Size to Inches.	10	12	13	14	16	18	20	22
1 x 2	1 2/3	2	2 1/6	2 1/3	2 2/3	3	3 1/2	3 2/3
1 x 3	2 1/2	3	3 1/4	3 1/2	4	4 1/2	5	5 1/2
1 x 3 1/2	2 11/12	3 1/2	3 19/24	4 1/12	4 2/3	5 1/4	5 5/6	6 5/12
1 x 4	3 1/3	4	4 1/3	4 2/3	5 1/3	6	6 2/3	7 1/3
1 x 5	4 1/6	5	5 5/12	5 5/6	6 2/3	7 1/2	8 1/3	9 1/6
1 x 6	5	6	6 1/2	7	8	9	10	11
1 x 8	6 2/3	8	8 2/3	9 1/3	10 2/3	12	13 1/3	14 2/3
1 x 9	7 1/2	9	9 3/4	10 1/2	12	13 1/2	15	16 1/2
1 x10	8 1/3	10	10 5/6	11 2/3	13 1/3	15	16 2/3	18 1/2
1 x12	10	12	13	14	16	18	20	22
1 x13	10 5/6	13	14 1/12	15 1/6	17 1/3	19 1/2	21 2/3	23 5/6
1 x14	11 2/3	14	15 1/6	16 1/3	18 2/3	21	23 1/3	25 2/3
5/4x 3	3 1/8	3 3/4	4 1/16	4 3/8	5	5 5/8	6 1/4	6 7/8
5/4x 4	4 1/6	5	5 5/12	5 5/6	6 2/3	7 1/2	8 1/3	9 1/6
5/4x 5	5 5/24	6 1/4	6 37/48	7 7/24	8 1/3	9 3/8	10 5/12	11 11/24
5/4x 6	6 1/4	7 1/2	8 1/8	8 3/4	10	11 1/4	12 1/2	13 3/4
5/4x 8	8 1/3	10	10 5/6	11 2/3	13 1/3	15	16 2/3	18 1/3
6/4x 9	9 3/8	11 1/4	12 3/16	13 1/8	15	16 7/8	18 3/4	20 5/8
5/4x10	10 5/12	12 1/2	13 13/24	14 7/12	16 2/3	18 3/4	20 5/6	22 11/12
5/4x12	12 1/2	15	16 1/4	17 1/2	20	22 1/2	25	27 1/2
2 x 3	5	6	6 1/2	7	8	9	10	11
2 x 4	6 2/3	8	8 2/3	9 1/3	10 2/3	12	13 1/3	14 2/3
2 x 9	15	18	19 1/2	21	24	27	30	33
2 x10	16 2/3	20	21 2/3	23 1/3	26 2/3	30	33 1/3	36 2/3
4 x 4	13 1/3	16	17 1/3	18 2/3	21 1/3	24	26 2/3	29 1/3
5 x 5	20 5/6	25	27 1/12	29 1/6	33 1/3	37 1/2	41 2/3	45 5/6
6 x 6	30	36	39	42	48	54	60	66
8 x 8	53 1/3	64	69 1/3	74 2/3	85 1/3	96	106 2/3	117 1/3
8 x10	66 2/3	80	86 2/3	93 1/3	106 2/3	120	133 1/3	146 2/3

Table Showing Capacity of Corn Crib (Height 7 1/2 Feet)

Length	1/2	1	12	14	16	18	20	22	24	28	32	36	48	54
Width 6	13	27	320	373	427	480	533	587	640	747	853	960	1280	1707
" 6 1/4	13	28	333	389	444	500	556	611	667	778	889	1000	1333	1727
" 6 1/2	14	29	347	404	462	520	578	636	693	809	924	1040	1387	1849
" 6 3/4	15	30	360	420	480	540	600	660	720	840	960	1080	1440	1920
" 7	16	31	373	436	498	560	622	684	747	871	996	1120	1493	1991
" 7 1/4	16	32	387	451	516	580	644	709	773	902	1031	1160	1547	2062
" 7 1/2	17	33	400	467	533	600	667	733	800	933	1067	1200	1600	2133

If not 7 1/2 feet high, multiply by the given height and cut off right-hand figure. If above crib were only 7 feet high, it would hold (800x7) = 560 (0 bu., etc.). The same space will hold 7 4/5 times as much grain as ear corn.

Autos At The County Fair

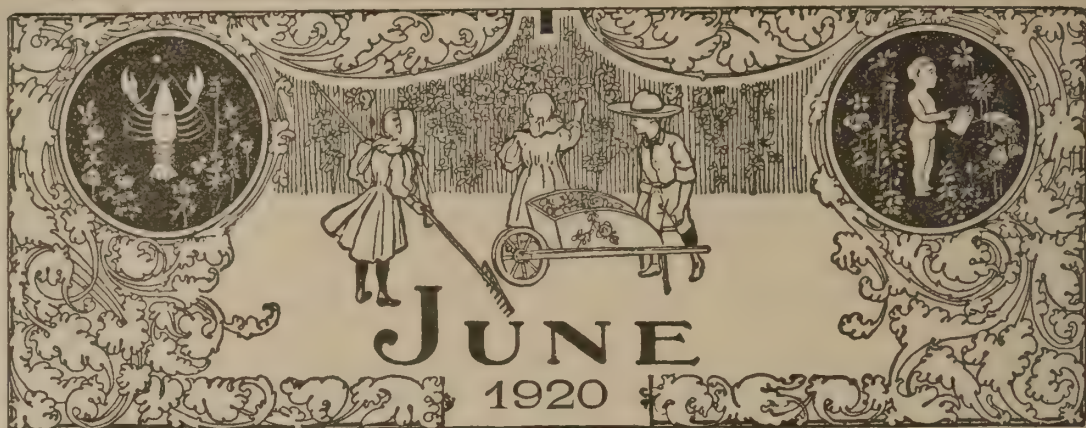
One has only to visit a fair to see that the horse-drawn pleasure vehicle is becoming a thing of the past. Also that the people who drive teams are looked on as more or less of a nuisance by the manipulators of the "chuchu" cars.

The steady jog of a horse team rather puts out the owners of autos, who forget that it has not been so very long when a man with a pair of high steppers to a Brewster Buggy, Landau or Victoria was the "observed of all observers," but, as the old darky said, "times done sholy changed!"

Roof Elevation

By the "pitch" of a roof is meant the relation which the height of the ridge above the level of the roof-plates bears to the span, or the distance between the studs on which the roof rests.

- If 1/4 pitch, multiply span by .559 or 7-12 nearly.
- If 1-3 pitch, multiply span by .6 or 3-5 nearly.
- If 3/8 pitch, multiply span by .625 or 5/8 nearly.
- If 1/2 pitch, multiply span by .71 or 7-10 nearly.
- If 5/8 pitch, multiply span by .8 or 4-5 nearly.
- If full, pitch, multiply span by 1-12 or 1.1-8 nearly.



MOON'S PHASES										LATITUDE					LATITUDE											
			BOSTON			NEW YORK			CHICAGO			Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon					Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.									
F. M.	D.	H. M.	A.	F. M.	D.	H. M.	A.	F. M.	D.	H. M.	A.															
L. Q.	9	1	58	A.	9	1	58	A.	9	0	58	A.														
N. M.	16	8	41	M.	16	8	41	M.	16	7	41	M.														
F. Q.	23	1	49	M.	23	1	49	M.	23	0	49	M.														
D. M.	D. W.	Historical Events.										MOON'S SIGNS					SUN FAST									
												Sun rises H. M.					Sun sets H. M.					Moon rises H. M.				
1	Tu	 1st. ♂ stationary											4	26	7	30	7	30	2	4	31	7	24	7	25	
2	W	 ♀ in ♍: ☾ in apogee ☾											4	25	7	30	8	18	2	4	31	7	25	8	13	
3	Th	Corpus Christi											4	25	7	31	9	1	2	4	30	7	26	8	57	
4	Fr	Pretoria captured, 1900											4	25	7	32	9	40	2	4	30	7	26	9	36	
5	Sa	U. S. Army drafted, 1917											4	24	7	32	10	15	2	4	29	7	27	10	12	
23. 1st Sunday after Trinity. Luke 16 15h. 9m. Day's Length, 14h. 59m.																										
6	S	♂ gr. hel. lat. N.											4	24	7	33	10	47	2	4	29	7	28	10	45	
7	M	Earthquake in Mexico, 1911											4	23	7	34	11	16	1	4	29	7	28	11	14	
8	Tu	 ☾ ☾ ☾											4	23	7	34	11	44	1	4	29	7	29	11	43	
9	W	 9th. Dickens died, 1870											4	23	7	35	morn	1	4	28	7	29	morn			
10	Th	☾ stationary											4	23	7	35	0	13	1	4	28	7	30	0	13	
11	Fr	St. Barnabas											4	22	7	36	0	44	1	4	28	7	30	0	45	
12	Sa	King Constantine I. abdic., 1917											4	22	7	36	1	17	0	4	28	7	31	1	19	
24. 2d Sunday after Trinity. Luke 14 15h. 15m. Day's Length, 15h. 3m.																										
13	S	☾ in ♊. Gen. Scott born, 1786											4	22	7	37	1	54	0	4	28	7	31	1	57	
14	M	Adlai E. Stevenson died, 1914											4	22	7	37	2	38	sl	4	28	7	32	2	42	
15	Tu	 ☾ ♀ ☾											4	22	7	38	3	31	0	4	28	7	32	3	35	
16	W	 16th. ☾ in perigee											4	22	7	38	sets	0	4	28	7	33	sets			
17	Th	♀ in ♍: ☾ ☾ ☾											4	22	7	38	8	39	1	4	28	7	33	8	35	
18	Fr	State Militias mobilized, 1916											4	22	7	39	9	24	1	4	28	7	33	9	21	
19	Sa	☾ ♀ ☾: ☾ ♀ ☾											4	23	7	39	10	3	1	4	28	7	34	10	1	
25. 3d Sunday after Trinity. Luke 15 15h. 17m. Day's Length, 15h. 6m.																										
20	S	Cloudburst in Breslau, 1912											4	23	7	40	10	37	1	4	28	7	34	10	36	
21	M	☾ enters ♋. Summer begins											4	23	7	40	11	8	2	4	28	7	34	11	8	
22	Tu	☾ gr libration W.											4	23	7	40	11	39	2	4	29	7	34	11	40	
23	W	 23d. H. B. Plant d., 1899											4	23	7	40	morn	2	4	29	7	35	morn			
24	Th	 St. John, Bapt. ☾ ♂ ☾											4	24	7	40	0	9	2	4	29	7	35	0	11	
25	Fr	Fire in Salem, Mass., 1914											4	24	7	40	0	39	2	4	29	7	35	0	42	
26	Sa	☾ in ♏. Lord Kelvin b., 1824											4	24	7	40	1	11	3	4	30	7	35	1	14	
26. 4th Sunday after Trinity. Luke 6 15h. 15m. Day's Length, 15h. 5m.																										
27	S	U. S. Troops in France, 1917											4	25	7	40	1	47	3	4	30	7	35	1	51	
28	M	Archduke Ferd'd assass., 1914											4	25	7	40	2	26	3	4	31	7	35	2	30	
29	Tu	St. Peter and St. Paul ☾											4	25	7	40	3	10	3	4	31	7	35	3	15	
30	W	♂ in ♊: ☾ in apogee											4	26	7	40	3	58	3	4	31	7	35	4	3	



Southern White Dent Corn raised with high-grade commercial fertilizer.



MOON'S PHASES											
BOSTON				NEW YORK				CHICAGO			
F. M.	1	3	41	M.	1	3	41	M.	1	2	41
L. Q.	9	0	6	M.	9	0	6	M.	8	11	6
N. M.	15	3	25	A.	15	3	25	A.	15	2	25
F. Q.	22	2	20	A.	22	2	20	A.	22	1	20
F. M.	30	6	19	A.	30	6	19	A.	30	5	19
LATITUDE											
Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon											
Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.											
SUN SLOW											
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July—1 to 8, fair and warm; 9, showers; 10, 11, fair; 12, 13, showers; 14, 15, 16, fair; 17, showers; 18, 19, fair; 20, rainy; 21, 22, fair; 23, 24, rainy; 25, 26, 27, fair; 28, showers; 29, 30, 31, fair.

ARE
ALWAYS
SUPERIOR



GIVE
GREATEST
RESULTS

“AA” QUALITY FERTILIZERS FOR EVERY KNOWN CROP

If you are using “AA” QUALITY now,
use more of it next crop time. If you
have never used “AA” QUALITY, try it.

Manufactured by

THE AMERICAN AGRICULTURAL CHEMICAL CO.



MOON'S PHASES										
BOSTON			NEW YORK			CHICAGO			MOON'S SIGNS	
D. H. M.			D. H. M.			D. H. M.				
L. Q.	7	7 51 M.	7	7 51 M.	7	6 51 M.				
N. M.	13	10 44 A.	13	10 44 A.	13	9 44 A.				
F. Q.	21	5 52 M.	21	5 52 M.	21	4 52 M.				
F. M.	29	8 3 M.	29	8 3 M.	29	7 3 M.				
D. M.	D. W.	Historical Events.								
31. 9th Sunday after Trinity. Luke 16 14h. 29m. Day's Length, 14h. 20m.										
1	S	Ger. decl'd War on Russia, 1914		4 51	7 20	7 54	6	4 56	7 16	7 53
2	M	♂ ♀ ♄. Elisha Gray b., 1835		4 52	7 19	8 22	6	4 57	7 15	8 22
3	Tu	♂ ♀ ♄: ♀ ♀ ♄		4 53	7 18	8 51	6	4 58	7 14	8 52
4	W	♄ gr. libration E.		4 54	7 17	9 21	6	4 58	7 13	9 23
5	Th	U. S. Troops at Archangel, 1918		4 55	7 15	9 54	6	4 59	7 12	9 56
6	Fr	♂ stationary: ♄ in ♀		4 57	7 14	10 31	6	5 0	7 10	10 34
7	Sa	7th. G. M. Ebers d. 1898		4 58	7 13	11 13	6	5 1	7 9	11 17
32. 10th Sunday after Trinity. Luke 19 14h. 13m. Day's Length, 14h. 6m.										
8	S	♂ ♀ ♄. Gen. Miles b., 1839		4 59	7 12	morn	5	5 2	7 8	morn
9	M	Submarine U-15 sunk, 1914		5 0	7 10	0 2	5	5 3	7 7	0 6
10	Tu	France decl. War on Aust., 1914		5 1	7 9	1 0	5	5 4	7 5	1 5
11	W	Dr. John B. Murphy died, 1916		5 2	7 8	2 5	5	5 5	7 4	2 9
12	Th	♀ gr. hel. lat. N.: ♄ in perigee		5 3	7 6	3 15	5	5 6	7 3	3 19
13	Fr	13th. ♂ ♀ ♄		5 4	7 5	4 28	5	5 7	7 1	4 31
14	Sa	♂ ♀ ♄: ♂ ♀ ♄		5 5	7 3	sets	5	5 8	7 0	sets
33. 11th Sunday after Trinity. Luke 18 13h. 56m. Day's Length, 13h. 50m.										
15	S	♂ ♀ ♄. N. Bonaparte b., 1769		5 6	7 2	7 36	4	5 9	6 59	7 36
16	M	Bapaume recaptured, 1918		5 7	7 0	8 9	4	5 10	6 58	8 10
17	Tu	♄ gr. libration W.		5 8	6 59	8 40	4	5 11	6 56	8 42
18	W	Admiral Evans retired, 1908		5 9	6 57	9 12	4	5 12	6 54	9 15
19	Th	♂ in ♀: ♄ in ♀		5 10	6 56	9 47	3	5 13	6 53	9 50
20	Fr	♂ ♀ ♄		5 11	6 54	10 25	3	5 14	6 52	10 29
21	Sa	21st. ♂ ♀ ♀		5 13	6 53	11 6	3	5 15	6 50	11 10
34. 12th Sunday after Trinity. Mark 7 13h. 37m. Day's Length, 13h. 33m.										
22	S	♂ ♀ ♄: ♂ ♀ ♄		5 14	6 51	11 51	3	5 16	6 49	11 56
23	M	♂ in perihelion: ♄ in apogee		5 15	6 50	morn	3	5 17	6 47	morn
24	Tu	St. Bartholomew		5 16	6 48	0 40	2	5 18	6 46	0 44
25	W	Ger. capt'd Brest Litovsk, 1915		5 17	6 47	1 33	2	5 19	6 44	1 37
26	Th	Germans capt'd Ft. Olita, 1915		5 18	6 45	2 29	2	5 20	6 43	2 33
27	Fr	♂ ♀ ♄. Han. Hamlin b., 1809		5 19	6 43	3 27	1	5 21	6 41	3 30
28	Sa	French recross the Somme, 1918		5 20	6 42	4 27	1	5 22	6 40	4 29
35. 13th Sunday after Trinity. Luke 10 13h. 19m. Day's Length, 13h. 15m.										
29	S	29th. ♂ ♀ ♄		5 21	6 40	rises	1	5 23	6 38	rises
30	M	Julian A. Weir born, 1852		5 22	6 39	6 54	1	5 24	6 37	6 54
31	Tu	♂ ♀ ♄. G. W. Curtis d., 1892		5 23	6 37	7 25	0	5 25	6 35	7 26

August—1, showers; 2, 3, fair; 4, showers; 5 to 9, fair; 10, rain; 11 to 21, generally fair; 22, rain; 23 to 28, fair; 29, 30, 31, unsettled and showers.

THE FEDERAL FARM LOAN BANK

Its Importance to the Farmer

The purpose of the Farm Loan Act is to enable a farmer to secure money to make needed improvements, or for the purchase of live stock, or to make it easier for the landless man to purchase a farm.

The Federal Land Bank stands ready at all times to lend money to farmers on farm mortgage securities. The interest charge will not be more than 6 per cent. There will be no commissions or bonuses. These loans will be made for periods ranging from five to forty years, thus doing away with the trouble and expense of frequent renewals.

Payments on the loan will be required annually or semi-annually, with interest. These payments, including interest, will be the same for each year, and of just such an amount as to entirely pay off the principal at the end of the period of the loan.

No one borrower can obtain more than \$10,000, nor more than 50 per cent. of the value of the land offered as security. All the money must be used for specified productive purposes, such as the purchase of farm land, improvements, equipment, fertilizer or live stock; or for the pay-

ment of mortgaged indebtedness. After a loan has run for five years the borrower may pay off the whole amount, if he so desires, on any interest date; or make a payment in addition to the regular installment.

The Federal Land Banks perform three services: first, they will convert the security which farm mortgages afford into a negotiable form, known as Farm Loan Bonds. Second, they will furnish additional securities for the protection of these bonds through their capital and surplus. Third, they will sell the land bank bonds in the open investment market which, for obvious reasons, the small farmer could not reach to advantage.

Full details of the purpose of this act—how to obtain a loan from the bank, and all details of its operation, are fully described in the United States Department of Agriculture's Farmers' Bulletin No. 792, entitled "How the Federal Farm Loan Act Benefits the Farmer." This may be obtained without cost upon a request addressed to the Bureau of Publication, Department of Agriculture, Washington, D. C.

INTEREST CALCULATIONS

RULE.—Multiply the principal by as many one hundredths as there are days, and then divide as follows:

Per cent.	4	5	6	7	8	9	10	12
Divide by	90	72	60	52	45	40	36	30

EXAMPLES.—Interest on \$100, for 90 days at 5 per cent.: $100 \times .90 = 9.00$ divided by 72 = 1.25 (one dollar and 25 cents); on \$1, for 30 days at 6 per cent.: $1 \times 30 = 300$, divided by 60 = .005 (5 mills).

TABLE.—Showing the number of days from any date in one month to the same date in any other month.

From	To	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January		365	31	59	90	120	151	181	212	243	273	304	334
February		334	365	28	59	89	120	150	181	212	242	273	303
March		306	337	365	31	61	92	122	153	184	214	245	275
April		275	306	334	365	30	61	91	122	153	183	214	244
May		245	276	304	335	365	31	61	92	123	153	184	214
June		214	245	274	304	334	365	30	61	92	122	153	183
July		184	215	243	273	304	335	365	31	62	92	123	153
August		153	184	212	243	273	304	334	365	31	61	92	122
September		122	153	181	212	242	273	303	334	365	30	61	91
October		92	123	151	182	212	243	273	304	335	365	31	61
November		61	92	120	151	181	212	242	273	304	334	365	30
December		31	62	90	121	151	182	212	243	274	304	335	365

EXAMPLE.—How many days from May 5th to October 5th? Look for May at left hand and October at the top; in the angle is 153. In leap year add one day if February is included.



MOON'S PHASES										LATITUDE			LATITUDE							
BOSTON				NEW YORK				CHICAGO				Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon			Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.					
D. H. M.				D. H. M.				D. H. M.				Sun rises H. M.			Sun sets H. M.			Moon rises H. M.		
L. Q.	5	2	5 A.	5	2	5 A.	5	1	5 A.	Sun rises H. M.			Sun sets H. M.			Moon rises H. M.				
N. M.	12	7	52 M.	12	7	52 M.	12	6	52 M.	Sun rises H. M.			Sun sets H. M.			Moon rises H. M.				
F. Q.	19	11	55 A.	19	11	55 A.	19	10	55 A.	Sun rises H. M.			Sun sets H. M.			Moon rises H. M.				
F. M.	27	8	57 A.	27	8	57 A.	27	7	57 A.	Sun rises H. M.			Sun sets H. M.			Moon rises H. M.				
Historical Events.										MOON'S SIGNS			SUN FAST							
D.	D.									Sun rises H. M.			Sun sets H. M.			Moon rises H. M.				
M.	W.									H. M.			H. M.			H. M.				
1	W	☾ gr. libration E.								☾			5 24 6 35 7 57			0 5 26 6 33 7 59				
2	Th	☿ gr. hel. lat. N.								☿			5 25 6 33 8 33			0 5 27 6 32 8 36				
3	Fr	☾ in ☿. Ger. occupy Riga, 1917								☿			5 26 6 32 9 13			1 5 28 6 30 9 17				
4	Sa	Steamer Hesperian sunk, 1915								☿			5 27 6 30 9 59			1 5 29 6 28 10 3				
36. 14th Sunday after Trinity. Luke 17 13h. 0m. Day's Length, 12h. 57m.																				
5	S	☾ 5th. Richelieu born, 1585								☾			5 28 6 28 10 53			1 5 30 6 27 10 58				
6	M	☾ McKinley shot, 1901								☾			5 29 6 27 11 54			2 5 31 6 25 11 58				
7	Tu	☾ ☿. J. G. Whittier d., 1892								☾			5 30 6 25 morn			2 5 32 6 24 morn				
8	W	☾ ☿ ☿: ☾ ☿ ☿ sup.: ☾ in perigee								☾			5 32 6 23 1 0			2 5 33 6 22 1 4				
9	Th	☾ ☿ ☿. Jules Grevy died, 1891								☾			5 33 6 22 2 9			3 5 34 6 20 2 12				
10	Fr	Empress Elizabeth assass., 1898								☾			5 34 6 20 3 20			3 5 35 6 18 3 22				
11	Sa	☾ ☿ ☿. Gen. T. J. Stuart d. 1917								☾			5 35 6 18 4 31			3 5 36 6 17 4 32				
37. 15th Sunday after Trinity. Matt. 6 12h. 40m. Day's Length, 12h. 38m.																				
12	S	☾ 12th. ☾ ☿ ☿: ☾ ☿ ☿								☾			5 36 6 16 sets			4 5 37 6 15 sets				
13	M	☾ ☿ ☿								☾			5 37 6 14 6 38			4 5 38 6 14 6 39				
14	Tu	☾ gr. libration W.								☾			5 38 6 13 7 10			4 5 39 6 12 7 12				
15	W	Ember Day. ☾ in ☿								☾			5 39 6 11 7 44			5 5 40 6 10 7 47				
16	Th	Railroad Disaster, Mexico, 1915								☾			5 40 6 9 8 21			5 5 41 6 9 8 25				
17	Fr	Ember Day								☾			5 41 6 7 9 2			6 5 42 6 7 9 6				
18	Sa	Ember Day. ☾ ☿ ☿								☾			5 42 6 6 9 46			6 5 43 6 5 9 50				
38. 16th Sunday after Trinity. Luke 7 12h. 21m. Day's Length, 12h. 20m.																				
19	S	☾ 19th. Garfield d. 1881								☾			5 43 6 4 10 33			6 5 44 6 4 10 37				
20	M	☾ ☾ in apogee								☾			5 44 6 2 11 24			7 5 45 6 2 11 28				
21	Tu	St. Matthew								☾			5 45 6 0 morn			7 5 46 6 0 morn				
22	W	Ger. occupy Jacobstadt, 1917								☾			5 46 5 59 0 18			7 5 47 5 59 0 22				
23	Th	☾ enters ☿. Autumn begins								☾			5 47 5 57 1 15			8 5 48 5 57 1 18				
24	Fr	Germans attack Dvinsk, 1915								☾			5 49 5 55 2 14			8 5 49 5 55 2 16				
25	Sa	☾ ☿ ☿. Irish Conv. in Cork, 1917								☾			5 50 5 53 3 15			8 5 50 5 54 3 17				
39. 17th Sunday after Trinity. Luke 14 12h. 1m. Day's Length, 12h. 1m.																				
26	S	☿ in ☿								☾			5 51 5 52 4 18			9 5 51 5 52 4 19				
27	M	☾ 27th. ☾ gr. libration E.								☾			5 52 5 50 5 22			9 5 52 5 50 5 22				
28	Tu	Siege of Antwerp, 1914								☾			5 53 5 48 rises			9 5 53 5 48 rises				
29	W	Michaelmas Day								☾			5 54 5 46 6 33			10 5 54 5 47 6 36				
30	Th	☾ in ☿. Bulgaria surr'd, 1918								☾			5 55 5 45 7 12			10 5 55 5 45 7 15				

September—1, 2, 3, fair; 4 to 8, unsettled and showers; 9, 10, 11, fair; 12, rainy; 13 to 16, fair; 17 to 21, unsettled and showers; 22 to 30, generally fair.

COMEDY AND COMMON SENSE

Some Good Resolutions

1. I will be square. I will not do any man; nor shall any man do me.
2. I will be thorough. I will do my work so carefully today that tomorrow will bring no regrets.
3. I will be happy. I will train my face to wear a smile and my tongue to say pleasant things.
4. I will be faithful. I will stick to my task till it's done, and forget the clock.
5. I will be energetic. When the alarm clock rings I'll be up at once.
6. I will be saving. I will put by something from earnings each week for that inevitable rainy day.
7. I will be industrious. A man who does no more than he is paid for never gets paid for more than he does.
8. I will be prompt. I will do it now, and do it right.
9. I will be optimistic. If you boost, the world boosts with you; if you knock, you knock alone.
10. I will believe in myself. There is no devil but fear and no sin but ignorance.

—o—

"What am I to do? My girl wants me to stop smoking cigarettes. It is either give up cigarettes or give up the girl."

"Nonsense. Use diplomacy. Get her interested in the coupons, my boy."

—o—

"The doctor says I must quit smoking. One lung is nearly gone."

"Oh, dear, John! Can't you hold out until we get enough coupons for that dining-room rug?"

—o—

"Do you want to know how to be lucky?" asks a writer in the Rochester Times Union. And then he proceeds to answer his own question thusly: "If you want to be luckier than the other fellow, just work harder than he does. Take a little more interest in your job than he does. Work longer than he does. Concentrate your thoughts on your work all the time more enthusiastically than he does. Keep it up, day in and day out, and finally you will be luckier than he is."

Pretty good recipe, don't you think?

Definite

A young Swede in South Dakota, who had been sent out to collect bills for the general store, returned with this report:

"Yon Brown, he say he pay when he sell his wheat; Ole Oleson, he say he pay when he sell his oats; and Yon Yonson, he say he pay in Yanuary."

"In January?" repeated the proprietor, surprised. "Why, he never set a date before. Are you sure he said January?"

"Well, Ay tank it bane Yanuary. He say it bane damn cold day when you get your money."

—o—

The fellow who is generally late has three hands—right hand, left hand and a little behind hand.

—o—

A Woman's Chances to Marry

One-half of 1 per cent. from 50 to 56 years of age; $\frac{3}{8}$ of 1 per cent. from 46 to 50 years of age; $2\frac{1}{2}$ per cent. from 40 to 45 years of age; $3\frac{3}{4}$ per cent. from 35 to 40 years of age; $15\frac{1}{2}$ per cent. from 30 to 35 years of age; 18 per cent. from 25 to 30 years of age; 52 per cent. from 20 to 25 years of age; $14\frac{1}{2}$ per cent. from 15 to 20 years of age.

—o—

Why Horses Sleep Standing

It is not an uncommon sight to go into a stable and find horses fast asleep in a standing position.

Many theories have been advanced to account for the apparently strange propensity of these equines. One is that they fear insects and mice, and will stand for hours in their stalls in a restful attitude, where most any other animal would lie down.

The writer has seen horses that were nervous about lying down when haltered in a narrow stall, but who, being put into a large box stall, would soon lie down and go fast asleep.

When turned out to pasture horses are more apt to lie down for their night's sleep, but this occurs around midnight, and then the animals only stay in a recumbent position an hour or so.



MOON'S PHASES															
BOSTON			NEW YORK			CHICAGO			LATITUDE						
L. O.	D. H. M.	A.	D. H. M.	A.	D. H. M.	D. H. M.	A.	D. H. M.	Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon	LATITUDE					
N. M.	11	7 50 A.	11	7 50 A.	11	6 50 A.				Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.					
F. Q.	19	7 29 A.	19	7 29 A.	19	6 29 A.									
F. M.	27	9 9 M.	27	9 9 M.	27	8 9 M.									
D. M.	D. W.	Historical Events.							MOON'S SIGNS		SUN FAST				
									Sun rises	Sun sets	Moon rises	Sun rises	Sun sets	Moon rises	
									H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	
1	Fr	Airplanes raid England, 1917							5 56	5 43	7 57	10	5 56	5 43	8 1
2	Sa	Railroad Disaster in Belg., 1915							5 57	5 41	8 49	11	5 57	5 42	8 53
40. 18th Sunday after Trinity. Matt. 22 11h. 41m. Day's Length, 11h. 42m.															
3	S	War Rev. Bill signed, 1917 ☾							5 58	5 39	9 48	11	5 58	5 40	9 52
4	M	☾ 4th. ☾ in perigee							6 0	5 38	10 52	11	5 59	5 38	10 56
5	Tu	☾ Tripoli surrendered, 1911							6 1	5 36	11 59	12	6 0	5 37	morn
6	W	☽ in aphelion							6 2	5 34	morn	12	6 1	5 35	0 2
7	Th	♂ ♀ ☾: ♀ in ☽							6 3	5 33	1 8	12	6 2	5 33	1 11
8	Fr	Wilson rejects Armistice, 1918							6 4	5 31	2 17	12	6 3	5 32	2 19
9	Sa	♂ ♀ ☾: ♂ ♀ ☾							6 5	5 29	3 25	13	6 4	5 30	3 26
41. 19th Sunday after Trinity. Matt. 9 11h. 21m. Day's Length, 11h. 24m.															
10	S	Belgrade captured, 1915							6 6	5 27	4 33	13	6 5	5 29	4 33
11	M	☾ 11th. ☾ gr libration W.							6 8	5 26	5 39	13	6 6	5 27	5 38
12	Tu	☾ Edith Cavell execut., 1915							6 9	5 24	sets	13	6 7	5 26	sets
13	W	♂ ♀ ☾: ☾ in ☽							6 10	5 23	6 17	14	6 8	5 24	6 20
14	Th	♂ ♀ ☾ Wm. Penn born, 1644							6 11	5 21	6 56	14	6 9	5 22	7 0
15	Fr	Cruiser Hawke sunk, 1914							6 12	5 19	7 39	14	6 10	5 21	7 43
16	Sa	Gen. Diaz took Vera Cruz, '12 ☾							6 14	5 18	8 26	14	6 11	5 19	8 30
42. 20th Sunday after Trinity. Matt. 22 11h. 1m. Day's Length, 11h. 5m.															
17	S	♂ ♂ ☾. Str. Antilles torp., 1917							6 15	5 16	9 16	15	6 13	5 18	9 20
18	M	St. Luke, Evang. ☾ in apogee							6 16	5 15	10 9	15	6 14	5 16	10 13
19	Tu	☾ 19th. E. Ely killed, 1911							6 17	5 13	11 4	15	6 15	5 15	11 7
20	W	☾ Explosion in Paris, 1915							6 18	5 11	morn	15	6 16	5 13	morn
21	Th	Bulg. occupy Kumanovo, 1915							6 19	5 10	0 1	15	6 17	5 12	0 4
22	Fr	♂ ♂ ☾. John Sherman d., 1900							6 20	5 8	1 0	15	6 18	5 11	1 2
23	Sa	Gen. Diaz captured, 1912							6 22	5 7	2 1	16	6 19	5 9	2 2
43. 21st Sunday after Trinity. John 4 10h. 42m. Day's Length, 10h. 48m.															
24	S	☾ gr. libration E.							6 23	5 5	3 4	16	6 20	5 8	3 4
25	M	☽ gr. elong. E., 24° 8'							6 24	5 4	4 9	16	6 21	5 6	4 8
26	Tu	☽ gr. hel. lat. S.							6 25	5 3	5 15	16	6 23	5 5	5 13
27	W	☽ 27th. ☾ in ☽							6 26	5 1	rises	16	6 24	5 4	rises
28	Th	☾ St. Simon and St. Jude							6 28	5 0	5 51	16	6 25	5 2	5 55
29	Fr	Austria negotiates Peace, 1918							6 29	4 58	6 43	16	6 26	5 1	6 47
30	Sa	☾ in perigee							6 30	4 57	7 41	16	6 27	5 0	7 45
44. 22d Sunday after Trinity. Matt. 18 10h. 25m. Day's Length, 10h. 31m.															
31	S	Hallowe'en. ♂ gr. hel. lat. S.							6 31	4 56	8 44	16	6 28	4 59	8 48

October—1, 2, 3, cloudy and rain; 4, 5, 6, fair; 7 to 10, cloudy; 11, rain; 12, 13, partly cloudy; 14 to 17, fair; 18 to 21, unsettled and rough; 22, 23, fair; 24, 25, rainy; 26, 27, 28, fair; 29, rain; 30, 31, partly cloudy.

PROTOX RATIONS FOR POULTRY

Meat Scraps "Good Enough to Eat"



TESTIMONIALS

Protox Really the Cheapest

James G. Kauffman, Notary Public, Dauberville, Pa., writes: "I have five flocks of 1000 White Leghorns; have used meat scrap for a number of years, but have never used any that I like as well as Protox. It does not have the bad odor which most meat scrap has, and has less bone than any other I ever used or handled. It is not only good for laying hens, but I use it for baby chicks. Am using it now at the rate of about 700 lbs. per month, substituting same for wheat, as I have cut out all wheat during the present crisis. While Protox costs more per ton than most meat scrap, it costs less per unit for the protein, and this is what we have to figure on."

Protox—Best Meat Scrap

Mr. Joseph Tolman, Rockland, Mass., inventor of the Tolman Fresh Air House, writes: "I have had 20 years' experience in poultry raising. I find in your Protox the best meat scrap I have ever used in all that time, and I have used a great many different brands."

Always the Same

A. C. Jones, manager poultry department, Marvel Homestead Farm, Georgetown, Del., writes: "We believe, after using many grades of

meat scrap, that Protox is the best and only genuine scrap on the market. Always the same; no danger in feeding it to chicks."

Good Sweet Smell—Always Clean

H. B. Kratz, proprietor Schwenksville Roller Mills, Schwenksville, Pa., writes: "Protox Pure Ground Meat Scrap is the best meat scrap I ever had since I have been in business. People come from a distance to get it, so that I am selling nearly as much again as I did before I had it. It has always a good sweet smell, and is very clean."

Poultrymen Prefer Protox

Shenberg & Rubinoff, wholesale dealers in flour, feed, etc., Vineland, N. J., write: "It is our experience in selling your Protox Pure Ground Meat Scrap that the poultrymen in this section would rather use this than any other kind that we ever handled."

Customers Repeat Orders

Joseph B. Weaver & Son, dealers in grain, Witmer, Pa., write: "We have been handling Protox Pure Ground Meat Scrap for about two years, and are entirely convinced the goods are O. K.; furthermore, our customers convince us by repeating their orders over and over again, which is the best evidence we could produce."

Protox All Claimed for It

Lehman & Wolgemuth, grain dealers, Elizabethtown, Pa., write: "We find Protox Pure Ground Meat Scrap the best we have ever handled; it is all that you claim it to be. All our customers who have used it say it is the best they have ever used and ask for more of it, because they want the best. Enclosed find our order for another ton."

Healthier Stock—Better Layers

Henry E. Heine, proprietor White Feather Farm, Lakewood, N. J., writes: "Now that I have used Protox for over a year, wish to say I can thoroughly recommend it to be the best to be found. Find my stock healthier and better layers, thanks to Protox."



MOON'S PHASES										LATITUDE					LATITUDE									
										Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon					Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.									
										SUN FAST														
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November—1 to 7, generally fair; 8, 9, rainy; 10 to 13, cloudy and rough; 14, 15, 16, rainy; 17, 18, 19, partly cloudy; 20, 21, fair; 22, 23, 24, cloudy; 25, 26, fair; 27, 28, 29, cloudy and damp, rain or snow; 30, fair.

FARM DIARY



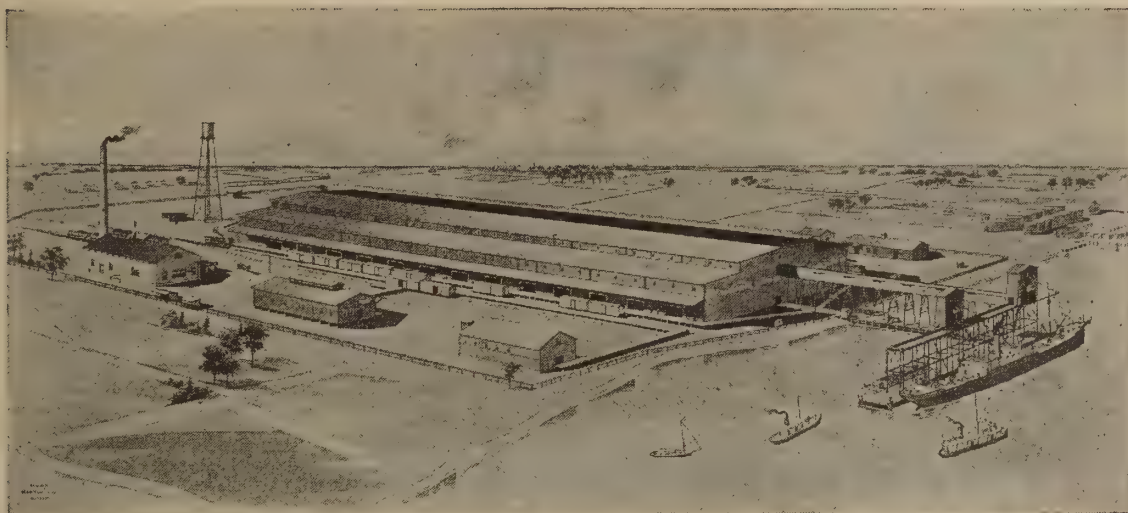
MOON'S PHASES						LATITUDE			LATITUDE											
BOSTON			NEW YORK			CHICAGO			Of Boston; New England, N. York State, So. Mich., Wisconsin, Iowa, Wyo. and Oregon			Of New York City; Philadel'a, Conn. New Jersey, Pa., Ohio, Indiana, Illinois, Neb. and Cal.								
L. Q.	2	11 29 M.	2	11 29 M.	2	10 29 M.														
N. M.	10	5 4 M.	10	5 4 M.	10	4 4 M.														
F. Q.	18	9 40 M.	18	9 40 M.	18	8 40 M.														
F. M.	25	7 38 M.	25	7 38 M.	25	6 38 M.														
L. Q.	31	11 35 A.	31	11 35 A.	31	10 35 A.														
D. D. M. W.						MOON'S SIGNS			SUN FAST			SUN FAST								
						Sun rises H. M.			Sun sets H. M.			Moon rises H. M.			Sun rises H. M.			Sun sets H. M.		
Historical Events.																				
1	W	Charleston Expos. opened, 1902				♄	7	9	4	29	♏	11	8	11	7	4	4	34	11	9
2	Th	♄ 2d. Jay Gould d., 1892				♄	7	10	4	29	♏	morn	10	7	5	4	34	♏	morn	
3	Fr	♄ ♀ ♄: ♀ gr. hel. lat. S.				♄	7	11	4	28	♏	0	15	10	7	6	4	33	♏	15
4	Sa	Wilson sailed for France, 1918				♄	7	12	1	28	♏	1	21	10	7	7	4	33	♏	20
49. 2d Sunday in Advent.						Luke 21			9h.15m. Day's Length, 9h. 25m.											
5	S	Premier Asquith resigns, 1916				♄	7	13	4	28	♏	2	25	9	7	8	4	33	♏	23
6	M	St. Nicholas. ♄ in ♏				♄	7	14	4	28	♏	3	27	9	7	9	4	33	♏	24
7	Tu	U. S. decl. War on Austria, 1917				♄	7	15	4	28	♏	4	27	8	7	10	4	33	♏	24
8	W	♄ ♂ ♄. Jerusalem taken, 1917				♄	7	16	4	28	♏	5	25	8	7	11	4	33	♏	21
9	Th	♄ Wm. Deering died, 1913				♄	7	17	4	28	♏	6	22	8	7	12	4	33	♏	18
10	Fr	♄ 10th. ☐ ♃ ☉				♄	7	18	4	28	♏	sets	7	7	13	4	33	♏	sets	
11	Sa	Battle of Magersfontein, 1899				♄	7	19	4	28	♏	5	52	7	7	14	4	33	♏	56
50. 3d Sunday in Advent.						Matt. 11			9h. 8m. Day's Length, 9h. 18m.											
12	S	♄ in apogee				♄	7	20	4	28	♏	6	46	6	7	15	4	33	♏	50
13	M	Wilson arrived in France, 1918				♄	7	20	4	28	♏	7	41	6	7	15	4	33	♏	44
14	Tu	♄ ♀ ♄. Washington d., 1799				♄	7	21	4	28	♏	8	38	5	7	16	4	33	♏	41
15	W	Ember Day. ♂ ♂ ♄				♄	7	22	4	29	♏	9	36	5	7	17	4	34	♏	38
16	Th	☐ ♄ ☉: ♂ ♂ ♄				♄	7	23	4	29	♏	10	35	4	7	18	4	34	♏	36
17	Fr	♄ Ember Day				♄	7	23	4	29	♏	11	35	4	7	18	4	34	♏	35
18	Sa	♄ 18th. Ember Day				♄	7	24	4	29	♏	morn	3	7	19	4	35	♏	morn	
51. 4th Sunday in Advent.						John 1			9h. 4m. Day's Length, 9h. 15m.											
19	S	Allies reject Peace Terms, 1916				♄	7	25	4	29	♏	0	36	3	7	20	4	35	♏	35
20	M	♄ gr. libration E.				♄	7	25	4	30	♏	1	40	2	7	20	4	35	♏	38
21	Tu	St. Thomas. Winter begins				♄	7	26	4	31	♏	2	46	2	7	21	4	36	♏	43
22	W	Rioting in Petrograd, 1917				♄	7	26	4	31	♏	3	54	1	7	21	4	36	♏	50
23	Th	♄ in ♊. Gen. F. T. Dent d. 1892				♄	7	27	4	32	♏	5	2	1	7	21	4	37	♏	58
24	Fr	♄ Ger. retake Mlava, 1914				♄	7	27	4	32	♏	6	10	0	7	22	4	38	♏	6
25	Sa	♄ 25th. Christmas Day				♄	7	28	4	33	♏	rises	sl.	7	22	4	38	♏	rises	
52. 1st Sunday after Christmas.						Matt. 1			9h. 5m. Day's Length, 9h. 16m.											
26	S	St. Stephen				♄	7	28	4	33	♏	6	24	1	7	23	4	39	♏	28
27	M	St. John, Evangelist. ♂ ♀ ♄				♄	7	28	4	34	♏	7	38	1	7	23	4	39	♏	41
28	Tu	Innocents. Pres. Wilson b. 1856				♄	7	29	4	35	♏	8	51	2	7	23	4	40	♏	53
29	W	China procl'd Republic, 1911				♄	7	29	4	35	♏	10	3	2	7	24	4	41	♏	4
30	Th	♄ ♄ ♄: ♂ ♄ ♄				♄	7	29	4	36	♏	11	12	3	7	24	4	42	♏	12
31	Fr	♄ 31st. ☉ in perihelion				♄	7	29	4	37	♏	morn	3	7	24	4	42	♏	morn	

December—1, 2, 3, cloudy; 4, 5, 6, fair; 7, rain; 8, 9, cold and rough; 10, 11, snowy; 12 to 17, generally fair; 18, cloudy; 19, 20, fair; 21, 22, 23, unsettled and rainy; 24, fair; 25, 26, stormy and snow; 27, 28, 29, partly cloudy; 30, 31, fair.

A FEW OF OUR MANY FACTORIES



Lazaretto Works at Baltimore, Md.



Subsidiary Works at Norfolk, Va.

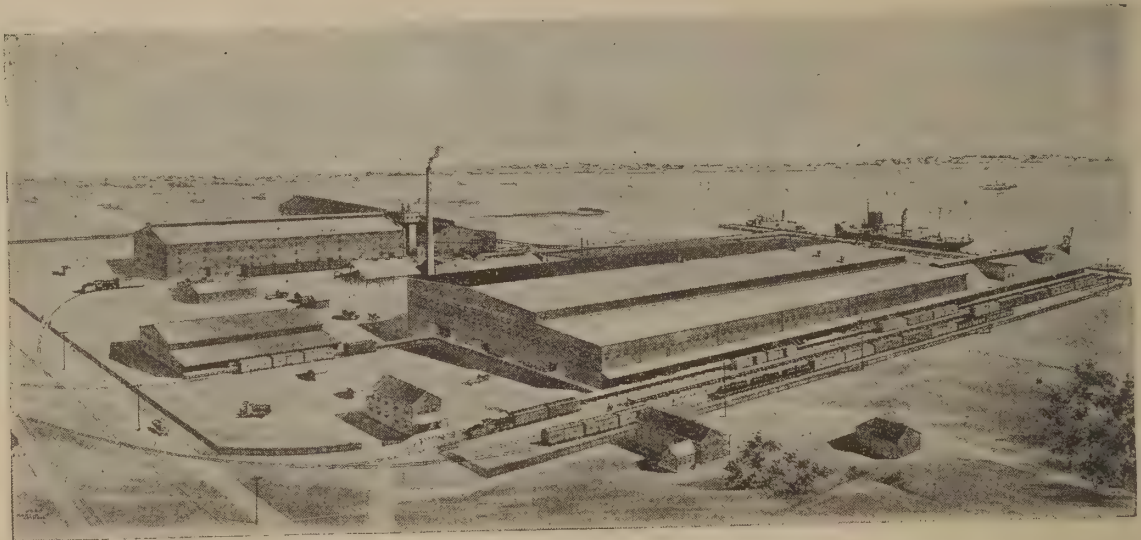


Works at Wilmington, N. C.

A FEW OF OUR MANY FACTORIES—(Continued)



Liebig Works at Carteret, N. J.



Williams and Clark Works at Carteret, N. J.



Ashepoo Works at Charleston, S. C.

EIGHT REASONS WHY AA QUALITY FERTILIZERS ARE PROFITABLE

1. THEY INCREASE THE YIELD.

AA QUALITY fertilizers are compounded to produce AA QUALITY yields. They are properly balanced for growing big, strong crops. Their plant food is highly available and is present in suitable forms for maintaining an even, vigorous growth.

2. THEY IMPROVE THE QUALITY OF THE CROP.

Tobacco, fruit, potatoes, and in fact, all truck crops, as well as corn, wheat, and other grains bring much better prices if they are of superior quality. A fertilizer of AA QUALITY will help you secure crops of AA QUALITY.

3. THEY HASTEN MATURITY.

Earliness affects the price of potatoes, tomatoes, sweet corn, and other vegetables as much as the quality. Early maturity is also important in the case of cereals, since the crops can be harvested earlier and thus often escape unfavorable weather. In the high altitudes where the season is short, early maturity insures hard, sound corn. Properly balanced fertilizers of AA QUALITY often hasten maturity noticeably.

4. THEY INSURE THE CROP.

A well-fed plant makes a good, strong start, and is in better condition to withstand drought, disease, and insect attacks than one that has been weakened by lack of plant food. AA QUALITY fertilizers that feed the plant properly from start to finish are, therefore, a good form of insurance; they increase the chances for a big, sound, early crop of superior quality.

5. THEY BENEFIT THE SUCCEEDING CROP.

When AA QUALITY fertilizers are applied in proper quantities, they often have a markedly beneficial effect upon the succeeding crop. For example, oats which follow potatoes that were well fertilized with AA QUALITY fertilizers generally make an excellent growth without further fertilization. Also, corn following fertilized grass generally yields much more than corn which follows grass that has not been fertilized.

6. THEY ENRICH AND IMPROVE THE SOIL.

Long continued tests by experiment stations have shown that good fertilizers, used continually, enrich the soil in plant food, increase the supply of humus, and promote the growth of beneficial bacteria. It has been found that even when no stable manure is used and even though no green manure crops are plowed under, good complete fertilizers, in conjunction with proper crop rotations, increase the supply of humus and organic matter in the soil. This is on account of the larger quantities of roots and stubble turned under. Remember, therefore, when AA QUALITY fertilizers increase the yields of grass, corn, and grains, they are also increasing the organic matter and future productiveness of the soil. This is a very important consideration in view of the growing scarcity of stable manure. The shortage of stable manure, its increasing price, and the advancing cost of application need occasion no alarm to even the truck grower who formerly used it in large quantities, for experiments have shown that truck crops can be grown without manure, providing a suitable rotation is followed and proper commercial fertilizers are used.

AA QUALITY fertilizers promote the growth of beneficial bacteria by increasing the organic matter in the soil and by supplying them with plant food—bacteria need ammonia, phosphoric acid, and potash for their growth just as much as the higher plants.

AA QUALITY fertilizers are soil builders as well as crop producers and stimulators of favorable bacterial action.

7. THEY ARE FREE FROM DISEASE GERMS AND WEED SEEDS.

The fact that AA QUALITY fertilizers are free from disease germs and weed seeds makes their use on certain crops especially desirable. It is generally considered, for instance, that potatoes which are grown with

fertilizer are smoother, more mealy, less attacked by certain insects, and less affected by scab and various other diseases than those which are grown with a large amount of stable manure. The organisms that cause a wilting of tomatoes, potatoes, beans, and a number of other crops may also be transmitted through infected manure.

Killing weeds is expensive with the present high cost of farm labor. Remember, therefore, that AA QUALITY fertilizers, unlike stable manure, introduce no weed seeds into the soil.

8. THEY ARE READY FOR EVEN APPLICATION.

AA QUALITY fertilizers are thoroughly seasoned, finely ground, and free from lumps. They are in excellent condition for even application by hand or by fertilizer distributors.





Look for the "AA" Quality trade
mark. A small thing to look for,
but a big thing to find. : :



[illegible]

RHYME—GATHERED HERE AND THERE

"The Makings of a Man"

BY "BOB" WILDMAN.

Have you got the push, the punch, the
 pep,
Can you keep your head, and watch
 your step?
Can you fight the fight, with all your
 might—
Yet fight it clean and fight it right?
Can you slam a "Dempsey" into sin,
Dismiss Temptation with a grin?
Have you got the nerve to say "I
 can?"
Have you got the "makings of a
 man?"

Can you take your share of mental
 pain?
Can you fall, and rise, and start
 again?
Can you stand the gaff of ridicule
And never break the "Golden Rule?"
Can you face the depths of living
 hell—
And work towards Heaven just as
 well?
Can you meet the world and shake its
 hand?
Have you got the "makings of a
 man?"

Can you play the stakes in Life's
 great game
And win or lose—act just the same?
Can you realize when you've had your
 fill—
And quit, dead still, when you say
 you will?
Can you stand steadfast—and not re-
 treat
When the countless odds mean sure
 defeat?
Have you got the grit—have you got
 the sand?
Have you got the "makings of a
 man?"

The Man Who Fails

The man who fails is the sort of a
 chap
Who is always looking around for a
 snap;
Who neglects his work to regard the
 clock;
Who never misses a chance to knock.

He is grouchy and slow when work
 begins;
When it's time to quit, he jokes and
 grins.
He's always as busy as busy can be,
When he thinks the boss is around to
 see.

He believes that a "pull" is the only
 way
By which he can ever draw bigger
 pay;
And he sulks and growls when he sees
 his plan
Upset by the "push" of another man.

He's on the job when he draws his
 pay;
That done, he soldiers his time away;
While the men who tackle their jobs
 with vim
Keep pushing and climbing ahead of
 him.

For the man who fails has himself to
 blame,
If he wastes his chances and misses
 his aim;
He'd win, if he'd use his hands and
 wits;
The man who fails is the man who
 quits.

—Charles R. Barrett.

"Blues" Tonic

Cheer Up

Don't be discouraged
'Cause de clouds is black;
Sunshine is a-waiting
For to travel back.
I's seen rain a-plenty;
Thought 'twould never quit
Thunderin' an' lightnin'—
But I
 ain'
 drowned
 yit.

When de snowstorm's threatenin'
Don't you be afraid;
Spring will come as usual,
Smilin', undismayed;
When de rose is bloomin'
You won' mind it a bit.
I's seen a lot o' winter,
An' I
 ain'
 froze
 yit.

HISTORY OF THE GREAT WAR IN CONDENSED FORM

Principal Events

1914

June 28. Murder at Serajevo of the Archduke Francis Ferdinand.
July 23. Austro-Hungarian ultimatum to Serbia.
July 28. Austria-Hungary declares war on Serbia.
July 31. General mobilization in Russia. "State of war" declared in Germany.
Aug. 1. Germany declared war on Russia and invaded Luxemburg.
Aug. 2. German ultimatum to Belgium, demanding a free passage for her troops across Belgium.
Aug. 3. Germany declares war on France.
Aug. 4. Great Britain's ultimatum to Germany, demanding assurance that neutrality of Belgium would be respected. War declared by Great Britain on Germany.
Aug. 4. President Wilson proclaimed neutrality of United States.
Aug. 4-26. Belgium overrun: Liege occupied (Aug. 9); Brussels (Aug. 20); Namur (Aug. 24).
Aug. 6. Austria-Hungary declares war on Russia.
Aug. 10. France declares war on Austria-Hungary.
Aug. 12. Great Britain declares war on Austria-Hungary.
Aug. 16. British expeditionary force landed in France.
Aug. 18. Russia completes mobilization and invades East Prussia.
Aug. 21-23. Battle of Mons-Charleroi. Dogged retreat of French and British in the face of the German invasion.
Aug. 23. Tsingtau bombarded by Japanese.
Aug. 25-Dec. 15. Russians overrun Galicia. Lemberg taken (Sept. 2); Przemyśl first attacked (Sept. 16); siege broken (Oct. 12-Nov. 12). Fall of Przemyśl (March 17, 1915). Dec. 4, Russians 3½ miles from Cracow.
Aug. 26. Germans destroy Louvain.
Aug. 26. Russians severely defeated at Battle of Tannenberg in East Prussia.
Aug. 28. British naval victory in Helgoland Bight.
Aug. 31. Name St. Petersburg changed to Petrograd by Russian decree.
Sept. 3. French Government removed (temporarily) from Paris to Bordeaux.

Sept. 5. Great Britain, France and Russia sign a treaty not to make peace separately.
Sept. 6-10. Battle of the Marne. Germans reach the extreme point of their advance; driven back by the French from the Marne to the River Aisne. The battleline then remained practically stationary for three years (front of 300 miles).
Sept. 16. Russians under Gen. Rennenkampf driven from East Prussia.
Sept. 27. Successful invasion of German Southwest Africa by Gen. Botha.
Oct. 9. Germans occupy Antwerp.
Oct. 13. Belgian Government withdraws to Le Havre, in France. Germans occupy Ghent.
Oct. 16-28. Battle of the Yser, in Flanders. Belgians and French halt German advance.
Oct. 17—Nov. 17. French, Belgians, and British repulse German drive in first battle of Ypres, saving Channel ports (decisive day of battle Oct. 31).
Oct. 21. The sale of alcohol forbidden in Russia until the end of the war.
Oct. 28. De Wet's Rebellion in South Africa.
Nov. 1. German naval victory in the Pacific off the coast of Chile.
Nov. 5. Great Britain declared war on Turkey; Cyprus annexed.
Nov. 10—Dec. 14. Austrian invasion of Serbia (Belgrade taken Dec. 2, recaptured by Serbians Dec. 14).
Nov. 13. Proclamation by the President of the United States of neutrality of the Panama Canal Zone.
Dec. 8. British naval victory off the Falkland Islands.
Dec. 8. South African rebellion collapses.
Dec. 9. French Government returned to Paris.
Dec. 16. German warships bombarded West Hartlepool, Scarborough, and Whitby.
Dec. 24. First German air raid on England.

1915

Jan. 1—Feb. 15. Russians attempt to cross the Carpathians.
Jan. 7. The sale of absinthe forbidden in France for the duration of the war.
Jan. 24. British naval victory in North Sea off Dogger Bank.

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

- Jan. 25. Second Russian invasion of East Prussia.
- Feb. 4. Germany's proclamation of "war zone" around the British Isles after February 18.
- Feb. 10. United States note holding German Government to a "strict accountability" if any merchant vessel of the United States is destroyed or any American citizens lose their lives.
- Feb. 16. Germany's reply stating "war zone" act is an act of self-defense against illegal methods employed by Great Britain in preventing commerce between Germany and neutral countries.
- Feb. 18. German official "blockade" of Great Britain commenced. German submarines begin campaign of "piracy and pillage."
- Feb. 19. Anglo-French squadron bombards Dardanelles.
- Feb. 20. United States sends identic note to Great Britain and Germany suggesting an agreement between these two powers respecting the conduct of naval warfare.
- Feb. 28. Germany's reply to identic note.
- Mar. 1. Announcement of British "blockade": "Orders in Council" issued to prevent commodities of any kind from reaching or leaving Germany.
- Mar. 17. Russians captured Przemyśl and strengthened their hold on the greater part of Galicia.
- April 17—May 17. Second Battle of Ypres. British captured Hill 60 (April 19); (April 23); Germans advanced toward Yser Canal. Asphyxiating gas employed by the Germans. Failure of Germany to break through the British lines.
- April 22. German embassy sends out a warning against embarkation on vessels belonging to Great Britain.
- April 26. Allied troops land on the Gallipoli Peninsula.
- April 30. Germans invade the Baltic Provinces of Russia.
- May 1. American steamship "Gulflight" sunk by German submarine; two Americans lost. Warning of German embassy published in daily papers. "Lusitania" sails at 12.20 noon.
- May 7. Cunard steamship "Lusitania" sunk by German submarine (1,154 lives lost, 114 being Americans).
- May 10. Message of sympathy from Germany on loss of American lives by sinking of "Lusitania."
- May 12. South African troops under Gen. Botha occupy capital of German Southwest Africa.
- May 13. American note protests against submarine policy culminating in the sinking of the "Lusitania."
- May 23. Italy declared war on Austria-Hungary.
- May 25. Coalition cabinet formed in Great Britain; Asquith continues to be Prime Minister.
- May 28. Germany's answer to American note of May 13.
- June 1. Supplementary note from Germany in regard to the "Gulflight" and "Cushing."
- June 3. Przemyśl retaken by Germans and Austrians.
- June 8. Resignation of William J. Bryan, Secretary of State.
- June 9. United States sends second note on "Lusitania" case.
- June 22. The Austro-Germans recapture Lemberg.
- July 2. Naval action between Russian and German warships in the Baltic.
- July 8. Germany sends reply to note of June 9 and pledges safety to United States vessels in war zone under specified conditions.
- July 15. Conquest of German Southwest Africa completed.
- July 21. Third American note on "Lusitania" case declares Germany's communication of July 8 "very unsatisfactory."
- July 12—Sept. 18. German conquest of Russian Poland. Germans capture Lublin (July 31), Warsaw (Aug. 4), Ivangorod (Aug. 5), Kovno (Aug. 17), Novogeorgievsk (Aug. 19), Brest-Litovsk (Aug. 25), Vilna (Sept. 18).
- Aug. 4. Capture of Warsaw by Germans.
- Aug. 19. White Star liner "Arabic" sunk by submarine; 16 victims, 2 Americans.
- Aug. 20. Italy declared war on Turkey.
- Aug. 24. German ambassador sends note in regard to "Arabic." Loss of American lives contrary to intention of the German Government and is deeply regretted.
- Sept. 1. Letter from Ambassador von Bernstorff to Secretary Lansing giving assurance that German submarines will sink no more liners,

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

- without warning. Endorsed by the German Foreign Office (Sept. 14).
- Sept. 4. Allan liner "Hesperian" sunk by German submarine; 26 lives lost, 1 American.
- Sept. 7. German Government sends report on the sinking of the "Arabic."
- Sept. 8. United States demands recall of Austro-Hungarian ambassador, Dr. Dumba.
- Sept. 14. United States sends summary of evidence in regard to "Arabic."
- Sept. 25—October. French offensive fails to break through German lines.
- Oct. 4. Russian ultimatum to Bulgaria.
- Oct. 5. Allied forces land at Saloniki, at the invitation of the Greek Government.
- Oct. 5. German Government regrets and disavows sinking of "Arabic" and is prepared to pay indemnities.
- Oct. 6—Dec. 2. Austro-German-Bulgarian conquest of Serbia. Fall of Nish (Nov. 5), of Przemyśl (Nov. 30), of Monastir (Dec. 2).
- Oct. 14. Great Britain declared war against Bulgaria.
- Oct. 20. German note on the evidence in the "Arabic" case.
- Dec. 1. British under Gen. Townshend forced to retreat from Ctesiphon to Kut-el-Amara.
- Dec. 4. United States Government demands recall of Capt. Karl Boy-Ed, German naval attache, and Capt. Franz von Papen, military attache.
- Dec. 10. Boy-Ed and von Papen recalled.
- Dec. 15. Sir John French retired from command of the army in France and Flanders, and is succeeded by Sir Douglas Haig.
- Dec. 19. The British forces withdrawn from Anzac and Sulva Bay (Gallipoli Peninsula).
- Feb. 15. Secretary Lansing makes statement that by international law commercial vessels have right to carry arms in self-defense.
- Feb. 16. Germany sends note acknowledging her liability in the "Lusitania" affair.
- Feb. 21—July. Battle of Verdun. Germans take Ft. Douaumont (Feb. 25). Great losses of Germans with little results. Practically all the ground lost was slowly regained by the French in the autumn.
- Feb. 24. President Wilson in letter to Senator Stone refuses to advise American citizens not to travel on armed merchant ships.
- March 8. German ambassador communicates memorandum regarding U-boat question, stating it is a new weapon not yet regulated by international law.
- March 8. Germany declares war on Portugal.
- March 24. French steamer "Sussex" is torpedoed without warning; about 80 passengers, including American citizens, are killed or wounded.
- March 25. Department of State issues memorandum in regard to armed merchant vessels in neutral ports and on the high seas.
- March 27-29. United States Government instructs American Ambassador in Berlin to inquire into sinking of "Sussex" and other vessels.
- April 10. German Government replies to United States notes of March 27, 28, 29, on the sinking of "Sussex" and other vessels.
- April 18. United States delivers what is considered an ultimatum that unless Germany abandons present methods of submarine warfare United States will sever diplomatic relations.
- April 19. President addressed Congress on relations with Germany.
- April 24—May 1. Insurrection in Ireland.
- April 29. Gen. Townshend surrendered to the Turks before Kut-el-Amara.
- May 4. Reply of Germany acknowledges sinking of the "Sussex" and in the main meets demands of the United States.
- May 8. United States Government accepts German position as outlined in note of May 4, but makes it clear that the fulfillment of these conditions can not depend upon the nego-

1916

- Jan. 8. Complete evacuation of Gallipoli.
- Jan. 18. United States Government sets forth a declaration of principles regarding submarine attacks and asks whether the governments of the Allies would subscribe to such an agreement.
- Feb. 10. Germany sends memorandum to neutral powers that armed merchant ships will be treated as warships and will be sunk without warning.

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

- tiations between the United States and any other belligerent Government.
- May 16—June 3. Great Austrian attack on the Italians through the Trentino.
- May 24. Military service (conscription) bill becomes law in Great Britain.
- May 27. President in address before League to Enforce Peace says United States is ready to join any practical league for preserving peace and guaranteeing political and territorial integrity of nations.
- May 31. Naval battle off Jutland.
- June 5. Lord Kitchener drowned.
- June 21. United States demands apology and reparation from Austria-Hungary for sinking of "Petrolite," an American vessel.
- July 1—Nov. Battle of the Somme. Combes taken (Sept. 26). Failure of the Allies to break the German lines.
- Aug. 6—Sept. New Italian offensive drives out Austrians and wins Gorizia (Aug. 9).
- Aug. 27. Italy declares war on Germany.
- Aug. 27—Jan. 15, 1917. Roumania enters war on the side of the Allies and is crushed. (Fall of Bucharest, Dec. 6; Dobrudja conquered, Jan. 2; Focsani captured, Jan. 8).
- Sept. 7. Senate ratifies purchase of Danish West Indies.
- Oct. 8. German submarine appears off American coast and sinks British passenger steamer "Stephano."
- Oct. 28. British steamer "Mariana" sunk without warning (6 Americans lost).
- Nov. 6. British liner "Arabia" torpedoed and sunk without warning in Mediterranean.
- Nov. 29. United States protests against Belgian deportations.
- Dec. 5-6. Fall of Asquith Ministry; Lloyd George new Prime Minister.
- Dec. 12. German peace offer. Refused (Dec. 30) by Allies as "empty and insincere."
- Dec. 20. President Wilson's peace note (dated Dec. 18). Germany replies (Dec. 26). Entente Allies' reply (Jan. 10) demands "restorations, reparation, indemnities."
- their terms of peace; a separate note from Belgium included.
- Jan. 11. Supplemental German note on views as to settlement of war.
- Jan. 13. Great Britain amplifies reply to President's note of Dec. 18. Favors co-operation to preserve peace.
- Jan. 22. President Wilson addresses the Senate, giving his ideas of steps necessary for world peace.
- Jan. 31. Germany announced unrestricted submarine warfare in specified zones.
- Feb. 3. United States severs diplomatic relations with Germany; Bernstorff dismissed.
- Feb. 12. United States replies to Swiss Minister that it will not negotiate with Germany until submarine order is withdrawn.
- Feb. 18. Italians and French join in Albania, cutting off Greece from the Central Powers.
- Feb. 24. Kut-el-Amara taken by British under Gen. Maude (campaign begun Dec. 13).
- Feb. 26. President Wilson asks authority to arm merchant ships.
- Feb. 28. "Zimmermann note" revealed.
- March 4. Announced that the British had taken over from the French the entire Somme front; British held on west front 100 miles, French 175 miles, Belgians 25 miles.
- March 11-15. Revolution in Russia, leading to abdication of Czar Nicholas II (March 15). Provisional Government formed by Constitutional Democrats under Prince Lvov and M. Milyukov.
- March 12. United States announced that an armed guard would be placed on all American merchant vessels sailing through the war zone.
- March 17-19. Retirement of Germans to "Hindenburg line." Evacuation of 1,300 square miles of French territory, on front of 100 miles, from Arras to Soissons.
- March 22. United States formally recognized the new government of Russia set up as a result of the revolution.
- March 26. The United States refused the proposal of Germany to interpret and supplement the Prussian Treaty of 1799.
- March 27. Minister Brand Whitlock

1917

Jan. 10. The Allied Governments state

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

- and American Relief Commission withdrawn from Belgium.
- April 2. President Wilson asks Congress to declare the existence of a state of war with Germany.
- April 6. United States declares war on Germany.
- April 8. Austria-Hungary severs diplomatic relations with the United States.
- April 9—May 14. British successes in Battle of Arras (Vimy Ridge taken April 9).
- April 16—May 6. French successes in Battle of the Aisne between Soissons and Rheims.
- April 20. Turkey severs relations with United States.
- May 4. American destroyers begin co-operation with British navy in war zone.
- May 15—Sept. 15. Great Italian offensive on Isonzo front (Carso Plateau). Capture of Gorizia, Aug. 9. Monte Santo taken Aug. 24. Monte San Gabriel, Sept. 14.
- May 15. Gen. Petain succeeds Gen. Nivelle as commander in chief of the French armies.
- May 17. Russian Provisional Government reconstructed. Kerensky (formerly minister of justice) becomes minister of war. Milyukov resigns.
- May 18. President Wilson signs selective service act.
- June 3. American mission to Russia lands at Vladivostok ("Root Mission"). Returns to America Aug. 3.
- June 7. British blow up Messines Ridge, south of Ypres, and capture 7,500 German prisoners.
- June 12. King Constantine of Greece forced to abdicate.
- June 15. Subscriptions close for first Liberty Loan (\$2,000,000,000 offered; \$3,035,226,850 subscribed).
- June 26. First American troops reach France.
- June 29. Greece enters war with Germany and her allies.
- July 1. Russian army led in person by Kerensky begins a short-line offensive in Galicia, ending in disastrous retreat (July 19—Aug. 3).
- July 4. Resignation of Bethmann-Hollweg as German chancellor. Dr. George Michaelis, chancellor (July 14).
- July 20. Drawing at Washington of names for first army under selective service.
- July 20. Kerensky becomes premier on resignation of Prince Lvov.
- July 30. Mutiny in German fleet at Wilhelmshaven and Kiel. Second mutiny Sept. 2.
- July 31—Nov. Battle of Flanders (Passchendaele Ridge); British successes.
- Aug. 10. Food and fuel control bill passed.
- Aug. 15. Peace proposals of Pope Benedict revealed (dated Aug. 1). United States replies Aug. 27; Germany and Austria, Sept. 21; supplementary German reply, Sept. 26.
- Aug. 19. New Italian drive on the Isonzo front (Carso Plateau). Monte Santo captured (Aug. 24).
- Aug. 20-24. French attacks at Verdun recapture high ground lost in 1916.
- Sept. 3. Riga captured by Germans.
- Sept. 8. Luxburg dispatches ("Spurlos versenkt") revealed by United States.
- Sept. 15. Russia proclaimed a republic.
- Oct. 24-Dec. Great German-Austrian counterdrive into Italy. Italian line shifted to Piave River, Asiago Plateau, and Brenta River.
- Oct. 23-26. French drive north of the Aisne wins important positions including Malmaison Fort.
- Oct. 26. Brazil declares war on Germany.
- Oct. 27. Second Liberty Loan closed (\$3,000,000,000 offered; \$4,617,532,300 subscribed).
- Oct. 30. Count von Hertling succeeds Michaelis as German chancellor.
- Nov. 2. Germans retreat from the Chemin des Dames, north of the Aisne.
- Nov. 3. First clash of American with German soldiers.
- Nov. 7. Overthrow of Kerensky and Provisional Government of Russia by the Bolsheviki.
- Nov. 13. Clemenceau succeeds Ribot as French premier.
- Nov. 18.—British forces in Palestine take Jaffa.
- Nov. 22—Dec. 13. Battle of Cambrai. Successful surprise attack near Cambrai by British under Gen. Byng on Nov. 22 (employs "tanks" to break down wire entanglements in place of the usual artillery preparations). Surprise counter-attack by Germans, Dec. 2, compels British to give up fourth of ground gained. German attacks on Dec. 13 partly successful.

HISTORY OF THE GREAT WAR IN CONDENSED FORM— (Continued)

- Nov. 29. First plenary session of the Interallied Conference in Paris. Sixteen nations represented. Col. E. M. House, chairman of American delegation.
- Dec. 5. President Wilson, in message to Congress, advises war on Austria.
- Dec. 6. U. S. destroyer "Jacob Jones" sunk by submarine, with loss of over 40 American men.
- Dec. 6. Explosion of munitions vessel wrecks Halifax.
- Dec. 6-9. Armed revolt overthrows administration in Portugal.
- Dec. 7. United States declares war on Austria-Hungary.
- Dec. 9. Jerusalem captured by British force advancing from Egypt.
- Dec. 10. Gens. Kaledines and Kornilov declared by the Bolsheviki Government to be leading a Cossack revolt.
- Dec. 15. Armistice signed between Germany and the Bolsheviki Government at Brest-Litovsk.
- Dec. 23. Peace negotiations opened at Brest-Litovsk between Bolsheviki Government and Central Powers, under Presidency of the German foreign minister.
- Dec. 26. President Wilson issues proclamation taking over railroads and appointing W. G. McAdoo, director-general. Proclamation takes effect at noon, December 28.
- Dec. 29. British national labor conference approves continuation of war for aims similar to those defined by President Wilson.

1918

First Phase

- March 21. Germans move west from a 60-mile baseline inclosed by Vimy Ridge and the Arras salient on the north to the Oise-Ailette watershed on the south, obliterating the Cambrai salient.
- March 22-25. They penetrate beyond Croisilles, Bapaume, Peronne, Bril, and northwest of Noyon and claim the capture of 75,000 men and 600 guns. French reports place the enemy's loss at 600,000—the German maximum at Verdun, 1916-17.
- March 23-25. Demoralization of the Fifth British Army under General Gough. General Carcy with a scratch division keeps it in touch with General Byng's Third Army on the north, over an eight-mile

gap, and the French General Fayolle saves it in the south over a 30-mile gap, between it and the Sixth French Army.

March 29. French counter-attacks regain eight square miles between Noyon and Lassigny. The enemy envelops Montdidier.

March 29—April 1. Enemy consolidates his positions embracing a salient of 800 square miles with the vortex on the Somme, six miles east of Amiens. His attacks to envelop Albert successful.

April 4-7. Germans take strategic position of Hamel on the Somme sector but are defeated by the French at Casel and by the British at Villers-Bretonneux. The enemy is also unsuccessful in his attacks between the Luce and the Avre.

April 18-24. Germans struggle with the British for the possession of Villers-Bretonneux.

Second Phase

April 9. Between Ypres and Arras, 40 miles apart, the Germans strike on a 20-mile front between Givenchy and Fleurbaix.

April 10-11. They penetrate between Armentieres and Messines and develop as far as Hollebeke, four miles southeast of Ypres, enveloping the towns of Armentieres and Estaires and part of Messines Ridge.

April 12-17. Penetration reaches Loccon in the south, the Nieppe Forest in the center, and Bailleul in the north, thereby threatening the rest of the ridge, Mont Rouge and Mont Kemmel. The salient now represents 220 square miles of newly gained territory.

April 17-19. British voluntarily retire from Passchendaele Ridge.

April 24-27. The Germans force the French and British from Mont Kemmel.

May 12. The French recapture Hill 44 on the north flank of Mount Kemmel, thereby completing a series of maneuvers which henceforth places the Germans on the defensive in the Lys salient.

Third Phase

May 27. On a 40-mile front between Noyon and Rheims the Germans strike south with 25 divisions, or 325,000 men, and a large auxiliary

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

force of tanks and poison gas shells, overrun the Chemin des Dames, and cross the Aisne on an 18-mile front.

May 28. The Allies deploy east and west—east to the Brouillet-Savigny-Thillois line protecting Rheims and west down the Oise and the Aisne.

May 29. Germans make a sudden advance from the west of the salient, enveloping Soissons.

May 30. Germans reach the Marne between Chateau Thierry and Dormans on a six-mile front.

June 1. Germans work up the Marne a couple of miles beyond Dormans and consolidate their positions on the west between the Oise Canal and Soissons.

June 6-12. American marines bend back the German line north of Chateau Thierry—from Grandeles, Champillon, and Clerembant Wood east to Bussiares and Bouresches.

Fourth Phase

June 9. The Germans on the 20-mile base, west of their attack begun on front between Noyon and Montdidier, advance only two and a half miles before they are counter-attacked by the French near Hautebraye, between the Oise and the Aisne.

June 10. Enemy takes villages of Merv, Belloy and St. Maur and debouches from Thiescourt Wood.

June 11. With four new divisions the Germans reach Aronde, on the west; descend the Matz in the center; envelop the Ourscamps Forest on the east. But here, having made their maximum penetration of seven and a half miles, they are held up and driven back by the French, who captured 1,000 prisoners.

June 13-14. The French heavily attack at the center and drive the enemy beyond Courcelles and Croix Ricard.

June 16. The enemy attempts to cross the Matz, near its junction with the Oise, and is driven back with heavy casualties.

June 17. The enemy turns on a heavy shower of shells over the south bank of the Marne, but does not try to cross.

Fifth Phase

July 15. Americans are attacked at Vaux, northwest of Chateau-Thierry,

and southeast between Fossoy and Mazy, losing ground here, which is later recovered, and the enemy driven back across the Marne. At Bligny, southwest of Rheims, the Italians are driven east; at Prunay, east of Rheims, the French give ground.

July 16. Germans develop their positions on the south bank of the Marne, east of Mazy and south of Dormans. The penetration of Bligny is developed south to the Marne; that at Prunay is deepened.

July 17. From Bligny, the edge of the Montague Forest is reached, but the pocket of Prunay is closed.

(It will be observed that the first phase concerns the great Picardy salient; the second, Lys, and the third, fourth and fifth, the Marne. From June 26 until the day of his counter-offensive Foch secured strategic positions on the perimeters of these salients which were developed in the following manner:)

On the Marne

July 18. French and American detachments under General Mangin attack the right wing of the Crown Prince between Soissons and Chateau-Thierry on a 28-mile front with a penetration of six miles as far as the River Crise.

July 19. Italian detachments on the east of the salient northwest of the Mountain of Rheims recover Bouilly. In these two days (July 18-19) the Allies take 17,000 prisoners.

July 23. Save the plateau south of Soissons the entire sector northwest of Chateau-Thierry is recovered by the Allies. In the center they have crossed the Marne, threatening Jaulgonne. On the east they have advanced to within two miles of the Fismes-Chatillon highway. The booty from July 18 amounts to 25,000 prisoners and over 400 guns.

July 23-25. The enemy makes violent counter-attacks, which are repulsed.

Aug. 2. French occupy Soissons and report total number of prisoners since July 15 on the Marne and Champagne fronts to be 33,400. British detachments in the Plessier-Hulen region take the height north of Grand Rozoy and reach Cra-moiselle.

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

Aug. 5. Germans retreat north of the Vesle.

Aug. 28. Americans with Mangin move in force against Fismes and enemy's bridgehead near the Vesle-Aisne junction.

Sept. 5-11. Germans fall back from the Vesle to the Aisne.

On the Lys

Aug. 5. Germans withdraw from front line trenches north of La Bassee.

Aug. 7. British General Plumer with the Second Army launches attack on the Lawe River from a five-mile base and a penetration of 1,000 yards.

Aug. 18. Similar attack is made over a four-mile front west of Armentieres, forcing the Germans back between Bailleul and Vieux Berquin.

Aug. 19. British recover Mont Kemmel.

Aug. 30. Enemy retreats on a 20-mile front, evacuating Bailleul.

Sept. 2. American detachments capture Voormezele; British gain Neuve Eglise and command Wyaschaete from the west.

In Picardy

Aug. 8. The British General Rawlinson, with the French Generals Debeney and Humbert on his right, begins an advance on the plateau south of the Somme against the army of Von der Marwitz.

Aug. 10. Rawlinson has advanced nine miles; Debeney crosses the Avre; Humbert, south of Montdidier, moves toward Roye, turning the flank of Von Hutier on the Lassigny massif.

Aug. 10-11. Montdidier and Lassigny massif are captured by Humbert; the number of prisoners since August 8 has amounted to 40,000.

Aug. 18. Rawlinson is within one mile of Roye; a circling movement by the French is in progress southeast of Lassigny, occupying Canny-sur-Matz.

Aug. 19. The French overrun the Lassigny massif, advance on the Roye highway and take Le Hamel.

Aug. 20. General Mangin advances between the Oise and the Aisne to a depth of three miles.

Aug. 21. On Rawlinson's left General Byng with the Third British Army and the American Thirtieth Division begin an offensive north of the

Ancre and reach Beaucourt, Bucquoy, Ablainzeville and Moyenneville. South of the Oise General Mangin advances to Cuts, Camelin and Pantoise, out-flanking Noyon.

Aug. 22. Between the Ancre and the Somme, from north of Bray to Albert, the British penetrate two miles.

Aug. 23. British on a 30-mile front, from Mercatel (five miles south of Arras) to Lihons, take a large number of towns stretching from Gomiecourt, north of the Somme, to Chuignolle, south of it, and penetrate German lines two miles.

Aug. 24. British carry Thiepval Ridge and Grandcourt, and open the whole road from Albert to Bapaume.

Aug. 25-26. British advance in the north along the Scarpe, and in the center take Suzanne and Cappy, near the Somme. Byng crosses the Hindenburg line between Arras and Bapaume.

Aug. 27. Roye taken by General Debeney.

Aug. 28-29. German retreat from the Scarpe to above the Aisne on a front of 40 miles; the British take Bapaume and the French Noyon. General Mangin's center crosses the Ailette. Americans (3d Division) with Mangin drive the Germans out of Juvigny, exposing the German line St. Gobian-Aisne.

Aug. 30. The French take Mont St. Simeon, which exposes the Noyon spur and opens the way up the Oise.

Sept. 1. Peronne taken by the British, who cross the Drocourt-Queant "switch line" the next day.

Sept. 5-6. Americans with Mangin press the enemy back between Viell Arcy and Villers-en-Praveres.

Sept. 12. Great progress made by the British toward Cambrai, capturing Havrincourt, Moeuvres and Trescault.

Sept. 16. General Mangin thrusts against the St. Gobian forest and the Chemin des Dames.

Sept. 18. Rawlinson's Fourth British Army and Debeney's First French Army expose the outer center defenses of the Hindenburg line northwest of St. Quentin.

Sept. 25. American Thirtieth, Thirty-eighth and Twenty-seventh Divisions advance from a 14-mile front in the direction of Cambrai, cross-

HISTORY OF THE GREAT WAR IN CONDENSED FORM— (Continued)

ing the Canal du Nord and ramifications of the Hindenburg line and taking 6,000 prisoners, which are increased to 10,000 on the following day.

Sept. 29. Americans with Rawlinson on their right press forward on a 30-mile front before St. Quentin to the Sensee Canal, taking Bellecourt and Nauroy.

Oct. 2. Debeney's troops occupy St. Quentin.

Oct. 3. Lens and coal fields evacuated by the Germans.

Oct. 9. Cambrai occupied by the Allies.

Oct. 10. British capture Le Cateau.

Oct. 12. Mangin has reoccupied nearly the entire length of the Chemin des Dames.

Oct. 13. Mangin takes the enemy strongholds of La Fere and Laon.

(By the second week in September the Allies had practically obliterated the three salients. Then on September 12 the First American Army obliterated that of St. Mihiel. This was followed by two great flanking movements: September 26 in Champagne and September 28 in Flanders, and then in the second week in October a general advance of the Allied armies from the sea to the Meuse.)

St. Mihiel and Its Sequel

Sept. 12. First American Army, under Maj.-Gen. Hunter Liggett, assaults the famous St. Mihiel salient between Verdun and Metz, recovers an area of 200 square miles, releases the Verdun-Toul-Nancy railway, and captures 20,000 prisoners and over 100 guns.

Sept. 15. Approaches to the Bassin de Briey iron region reached and the right wing of the First Army under fire from Metz forts.

Sept. 26. First American Army begins a great offensive covering a 30-mile front from the Meuse west through the Argonne Forest; the French Fourth Army, under General Gouraud, from the Argonne west to the Suippe, a front of 20 miles. The Americans advance from five to six miles, taking Gercourt, Guicy, Montfaucon, Cheppy and Verennes; the French three or four miles, taking Navarin Farm. The Germans in two days lose 10,000 in prisoners.

Sept. 28. Americans advancing down the Oise come in contact with the German Kriemhilde line, with its

bridgehead at Brioules. The French capture the strategic position of Somme-Py.

Sept. 30. Gouraud advances to within five miles of Vouziers. The Americans take Apremont.

Oct. 4. Americans cross the Kriemhilde line. The French advance north of Auberive.

Oct. 5. The French advance for three miles down the Suippe River; the Americans extend rupture of Kriemhilde line beyond Romagne.

Advance in Flanders

Sept. 28. With the British fleet bombarding the German coastal defenses from Nieuport to Zeebrugge on the North Sea, the Belgian Army, with the Second British Army, under General Plumer, and the Fifth, under General Birdwood, later (Oct. 2) to be reinforced by the Sixth French under General Degoutte, attacked the front in Flanders—at first from Dixmude to the Passchendaele Ridge north of Ypres, and then south to the Lille sector—and captured 4,000 prisoners and an immense amount of supplies.

Sept. 29-30. Dixmude and Roulers and many smaller towns fall to the Belgians; the British overrun Passchendaele Ridge.

Oct. 2. Lille as objective of enveloping movement; Belgians go beyond Roulers, taking Hoogde and Handzeeme; British capture Rolleghecapelle and advance on La Basse Canal, threatening Lens from the northwest and reoccupying Armentieres.

Oct. 3-13. Allies consolidate their lines from the sea to beyond Lille.

From the Sea to the Meuse

Oct. 12. Second American Army, under Maj.-Gen. Robert L. Bullard, attacks northwest of Verdun.

Oct. 14. Belgian, French and British attack in Flanders from Dixmude to Wervied. On the Aisne, 12 miles east of Laon, the French take Sissonne, on the Hunding line.

Oct. 15. In Flanders the British take Menin, southwest of Lille they cross Haute Deule Canal. North of the Aisne French take Olizy and Termes, near Grand Pre. First American Army takes Hill 299 and storms St. Georges.

Oct. 16. Second British Army cap-

HISTORY OF THE GREAT WAR IN CONDENSED FORM—

(Continued)

- tures Wervicq, Comines, Hulluin and Wevelghem in Lys Valley, Flanders; on its left Belgians and French take Ingelmuster and Lechtevelde, and outflank Thourout. First American Army takes Grand Pre at vortex of Argonne Forest.
- Oct. 17. Fall of Ostend, Lille and Douai; Ostend occupied by British naval forces under Sir Roger Keyes; Fifth British Army enters Lille; First British Army, under Horne, enters Douat. Anglo-French attack from Le Cateau to the Oise carries the line of the Selle and part of Le Cateau. First American Army wins control of the Cote de Chatillon.
- Oct. 18. Blankenberghe occupied in advance of Belgians on Bruges; French advance on Ghent; Sensee crossed north of Courtrai; Americans, with British, capture Wassigny and Ribeaupville. American First Army captures Bantheville; the French Fourth crosses the Aisne.
- Oct. 19. Zeebrugge and Bruges occupied by the Belgians; First British Army captures Denain. French penetrate the Hunding line between the Oise and the Serre. First American Army loses and regains Bantheville.
- Oct. 20. With the Belgian coast clear of the enemy, he retreats from the Dutch frontier to the south of Valenciennes; British Second Army on the road to Brussels.
- Oct. 21. Fifth British Army reaches Tournai. First British Army enters Valenciennes suburbs.
- Oct. 22. Franco-Belgian attack on Lys Canal toward Ghent takes 11,000 prisoners. French advance on Serre front reduces La Fere salient and captures Chalandry and Grandlup.
- Oct. 23. Third and Fourth British Armies advance four miles on 20-mile front between the Scheldt and Le Cateau; on their left the First, between Valenciennes and Tournai, takes Bruay, Bleharies and Espain. First American Army breaks through Freya defenses.
- Oct. 24. Third and Fourth British Armies, between the Scheldt and the Sambre, advance within a mile of Valenciennes-Metz railway.
- Oct. 25. First British Army north of Valenciennes goes through Raismes Forest into the Conde loop of the Scheldt; the Third gains an 8-mile stretch on the Valenciennes-Avesnes railway. French attack between the Oise and the Serre, Souche and Aisne on a 25-mile front.
- Oct. 26. British takes Artes and Farnars and Englefontaine, south of Valenciennes. First French Army, under Debeney, crosses the Peron and advances between Sissonne and Chateau-Porcien. Germans begin a retreat toward Hirson, between the Oise and Serre. First American Army employs 16-inch naval guns against Mezieres-Metz supply railway.
- Oct. 31. American Thirtieth Division, with the British Third Army, on a 15-mile front, releases several towns from Pergwyk to Winterken.
- Nov. 2. Valenciennes occupied by British.
- Nov. 3. Belgian Army reaches Terneuzen and liberates 10 miles along the Dutch frontier. First American Army shatters Mezieres-Metz railway at Montmedy and Conans.
- Nov. 4. British First, Third and Fourth Armies, with two American divisions, advance on 30-mile front, capturing 10,000 prisoners and 200 guns between the Scheldt and the Oise-Sambre Canal. Passage of canal forced by the First French, with a bag of 3,000 prisoners and 15 guns.
- Nov. 6. First American Army captures heights of the Woevre and Sedan.
- Nov. 7. Germans begin a 75-mile front retreat from the Scheldt to the Aisne, and Debeney, with the First French, reaches the railway between La Capelle and Hirson and on the Thon as far as Leuze.
- Nov. 9. French pass through Hirson and invest Mezieres. Maubege taken by Rawlinson's Fourth British Army.
- Nov. 11. Germany capitulated.



Upland cotton growing on A. A. C. fertilizer near Albany, Georgia.

BANKING HINTS

HOW TO OPEN AN ACCOUNT—

First call at the bank and make yourself known to some one of the officials, who will explain their service regarding accounts. The receiving teller as you make your first deposit will give you a pass book and make the credit entries, which will be your receipt for the various sums deposited.

This book is the property of the bank and should be used for no other purpose. At the same time your signature will be taken on a card kept for that special purpose, and you should always endorse notes and checks precisely in the same way, so as to avoid confusion.

TO MAKE OUT DEPOSIT SLIPS

—The bank will furnish you with deposit slips, which you should fill out and have proved by the teller. The cash, checks, drafts and other paper are always listed separately. Write figures in the column, add up, and express the total. Give your pass book and deposit slip to the Receiving Teller, so that he may enter the proper amount to your credit in your book.

TO DRAW CHECKS—A check is merely an order for the bank to pay a certain sum to some person you designate, this sum is taken out of the funds standing to your credit. You can make checks payable to order or bearer, if made payable to order the person known as payee must endorse the check before the money will be paid by the bank; checks payable to bearer can be presented by any one, paid and no questions asked.

However, if the paying teller suspects that there is anything wrong when a bearer check is presented he may refuse to cash it until investigation is made. Care should be taken by the maker of a check to protect himself against a dishonest use of his paper. Always write a check with pen and ink. Be sure you write the amount both in figures and words as far to the left as possible, so that nothing can be inserted before it; fill up remaining space with a heavy line, so that nothing can be added after the amount. Write your figures plainly and see that they agree in amount with the written amount given.

CERTIFIED CHECKS—A certified check is guaranteed by the bank

on which it is drawn to be good when properly endorsed. This guarantee is written across the face and signed by an official of the bank.

This binds the bank to pay the check, but the bank may limit the time, and usually does, in which it must be presented.

ENDORSEMENTS—An endorsement is simply the signature of the payee on back of a check or other paper. All checks should be endorsed by the depositor when he deposits same, whether payable to his order or not. Endorsement to a specified person should read:

Pay to the order of John Smith
(Signature of Endorser)

This check is then payable when endorsed by John Smith or to his order.

INTEREST—Interest is the premium paid for the use of money or the accumulation of an unpaid debt. Interest should be paid when due, or else it may be considered as principal and also bear interest. This is called compound interest.

COLLECTIONS—The collection department of a bank is of great value to its depositors. Notes, drafts and all negotiable paper will be accepted for collection and the bank notifies its customers promptly of the payment or refusal of all collections.

PROTEST—When the bank has no funds to your credit to meet any note, draft or bill of exchange which you have given, the matter is subject to protest, which is a written document drawn up by a notary public.

The document is then attached to the dishonored paper, and each endorser is at once notified that payment has been refused. The holder must give notice to all whom he wishes to hold liable, but notice to any one endorser binds him, and if there are any other endorsers whom he wishes to hold liable he must notify them. In leaving paper for collection you should give the bank instructions whether or not to protest for non-payment.

DRAFTS AND ACCEPTANCE—A common method of collecting accounts is by either "at sight" or "time drafts." When a "time draft" is presented to a drawee he acknowledges the obligation by writing across the face of the paper "accepted," giving also the date and his signature.

BANKING HINTS—(Continued)

OVERDRAFTS—The law on this point states that a Cashier or Teller should not pay money on a check when the funds to the credit of the drawer are insufficient to meet same. It further states that the drawee of the check is a party to the wrongful act, and the bank can recover the amount. It is one of the strictest and most important laws for the bank to allow no overdrafts. Never under any circumstances overdraw your account.

LETTERS OF CREDIT—A letter of credit is a great convenience to travelers, as it establishes their credit for the amount named therein at any point where there is a banker. The signature of the payee is written on the face of the letter as a means of identification, and often a full description of the personal appearance of the bearer is also given.

LOANS—Banks are always ready to loan money on proper security and usually give precedence to the application of a regular customer. The laws governing banking set forth what kind of security a bank can take so that some banking institutions are compelled to decline what others would readily accept.

IDENTIFICATION—In order to protect against the dishonest practice of unknown persons, banks are com-

pelled to require that all strangers shall be introduced by some responsible acquaintance of the bank, who can vouch for the character and integrity of the other.

FORGERY—The bank is supposed to know the handwriting of its customers and if it pays a check upon a forged signature it is liable for the amount. This rule simply applies to the signature, for the face of the paper may be in different handwriting and is not a matter of suspicion.

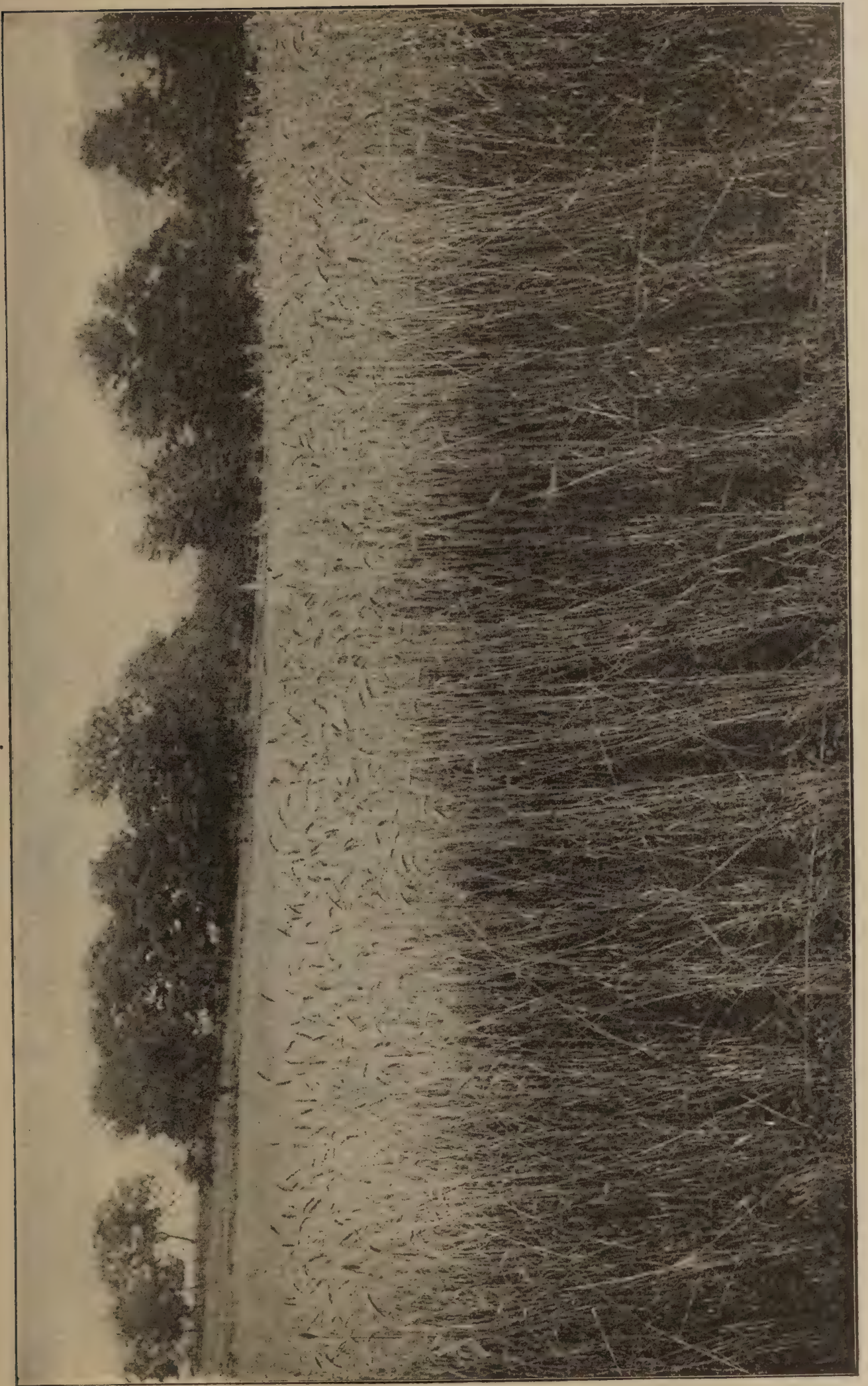
A fraudulent alteration in the body of a check after it is once signed constitutes a forgery as much as the simulation of the signature itself, and the check becomes useless even in the hands of an innocent holder. If payment is made by the bank the bank must stand the loss, unless it can be shown that the negligence of the drawer laid the foundation of the fraud.

LOST PAPER—If a check is lost, payment should be stopped as soon as possible by notifying the bank in writing of the fact, especially should this be done if the check is payable to the bearer, as any one possessing it can present it for payment, and the bank cannot be held liable to the rightful owner unless it has been officially notified not to pay the check.

DO IT NOW

If with pleasure you are viewing
Any work a man is doing,
If you like him, or you love him, tell
him now;
Don't withhold your approbation
Till the parson makes oration,
As he lies with snowy lilies o'er his
brow.
For no matter how you shout it,
He'll not really care about it.
He'll never know how many tear-
drops you have shed.
If you think some credit due him,
Now's the time to slip it to him,
For he cannot read his tombstone
when he's dead.

More than fame and more than
money,
Is the comment kind and sunny,
The hearty warm approval of a
friend.
For it gives to life a savor,
Makes you stronger, truer, braver,
And it gives you heart and spirit to
the end.
If he's earned your praise, bestow
it,
If you like him, let him know it,
Let the words of true encouragement
be said;
Do not wait till life is over,
When he's underneath the clover,
For he cannot read his tombstone
when he's dead.



Wheat raising in the South has tremendous possibilities.

COMEDY AND COMMON SENSE

Two Bits' Worth

There was once occasion for an official to establish beyond question the fact that a negro man and woman were married, so the negro said he would bring the preacher who had married them to testify to the fact. He brought the colored preacher around and the official asked:

"Parson, did you marry these two negroes?"

"No, sah," replied the preacher deliberately.

"Why, how is that?" inquired the perplexed official; "they swear they are married and that you married them."

"Well, Ah'll tell yoh all how it was," replied the parson. "Yoh see, dis nigger cum ter me an' asked me ter marry him, and Ah said, 'How much money yer got?' He sed 'Two dollahs.' Ah sed, 'All right, cum 'round ter de church.' When we got ter de church dis nigger didn't hav' nuthin' but two bits, an' yoh all knows yoh can't marry nobody worth while fer two bits, so Ah jest read de Christian Endeavor pledge ter 'em and turned 'em loose."

Half Off

Last year she wouldn't marry him because he was fat, but now that he has grown thin as a rail, she accepts him."

"Well, you know how women like a thing that has been reduced."

A negro recruit in a Southern camp was much impressed with the manner in which he was fitted out when he went to camp. He went to one of the officers and said:

"Am de Guv'ment givin' us all dese here clothes an' guns, an' things fer nuthin'?"

"Yes," was the answer.

"Well," said the surprised negro, "why in de land didn't dey start dis here wah sooner?"

The Bald Pate!

"The hairs of our heads are numbered."

"I've got your number."

Here's a clever sign I saw in a drug store window: "Soda fit for a King. Bring in your Queen!"

In Her Maiden Campaign

"Did you say the ring's a war relic, Mabel?"

"Yes, I won it in my first engagement."

From a Calf's Diary

Kicked over one pail of mash.

Got my head caught in a bucket.

Yelled like blazes for mother for an hour.

Rolled my eyes at a little boy and frightened him.

Experimented on how far I could spraddle my legs.

Tangled myself in 10 feet of rope.

Nibbled at a small green apple and had a tummy ache.

Refused to be hugged by an impudent hired man.

Local Talent

Uncle Ezra (at theatre): George, where do all them actors live?

George (the native): Why, they live here.

Uncle Ezra: Right here in New York, eh? Wal, by heck. They do purty good fer local talent.

Life is about ten per cent. what you plan to happen to you and ninety per cent. what happens to you. The only way to beat the game is to keep sweet and adjust yourself to the rapidly evolving scheme of things.

HUMAN—Race Tips

A dead fish will float down stream, but it takes a live one to swim against the current.

A tame tongue is rare—know when to speak and where.

All men are born equal, but they seldom grow up that way.

Keep pace with your work, it makes a big difference whether you retire from business or the business retires from you.

A fool is a man who gets wise too late.

To maintain order, excellence and harmony, in the territory immediately under one's own hat, will keep one fairly well employed.

The Application of Fertilizers

Almost as much depends upon the proper use of fertilizers as upon their composition. We must remember that chemically prepared fertilizers are **prepared plant foods**; that for best results they should be applied to a properly prepared seed bed or field. To feed highly concentrated foods to an old, winded horse or a sickly cow exposed to the cold and wet, is usually money and labor thrown away; so it is money and labor poorly expended to buy commercial manures and apply them to sour, half-baked land, or to land half plowed and poorly prepared.

Again, it is money poorly expended to apply chemical manures to land where poor seed is used, or where, after the crop has come up, it is neglected. Weeds, as well as cultivated crops, thrive on fertilizers. The only merit which weeds possess (if they possess any merit at all) is that they sometimes do for the farmer what he has neglected to do for himself. If he neglects to cultivate and protect the original crop which it is good for him and the soil to grow, provided it is properly grown, weeds step in and cover the ground, protecting it and, when plowed in, supply a certain amount of plant food and humus that is good for the soil.

Nature abhors a bare spot, so she sets to work to cover up bare spots with some sort of growth, even if it be only noxious weeds. In this sense they are a sort of catch or "cover" crop, occupying the land until a better crop takes their place. If there is any comfort in this view of the weed question, the shiftless farmer is welcome to it; but we do not recommend fertilizers to grow weeds even as catch or cover crops. Fertilizers are too costly for that purpose. Dirt is described as matter out of place; a weed is a growth which is out of place. Do not tolerate it anywhere, and certainly not on land which has been enriched with chemical manures for which one has paid good money.

The modern farmer keeps the horse cultivator going almost constantly. He does not wait until the weeds have

come up, but he nips them before or as soon as they have germinated, thus not only destroying the seed or the weed itself, but before it has got a footing, and long before it can go to seed to reproduce itself in the same field another year. In fact, the modern farmer cultivates not to destroy half-grown or full-grown weeds, but for the good of cultivation itself—to keep the surface of the soil in a fine, friable condition, to form a mulch on the surface which is known to conserve the moisture of the soil and thus to offset the effect of drouth; also to thoroughly mix the fertilizer or manure with the soil in order that each pound of soil may have its grain of plant food, and in order that the little rootlets may have an easier and better place in which to feed. Finally, he cultivates to admit the air and warmth in order to promote a crop of bacteria in the soil, without which the crop above the soil will not thrive.

The modern farmer, therefore, cultivates **to enrich his soil**, for that is what he really does when he conserves moisture and encourages the growth of bacteria. The killing of weeds is only incidental. In fact, if he has been thorough in his previous treatment of the soil, he practically has no weeds to kill, for they have been cultivated to extinction, except in case of frequent applications of stable manure.

To thousands of practical farmers in the East, and to many "dry farmers" in the West, weeds and ordinary drouth are no terror, they do not enter into their calculations; but these advanced farmers cultivate, and cultivate, and still cultivate. Thus their crops thrive and they thrive with them.

Reduce Acreage and Intensify Treatment

This leads us to recommend a reduction in the amount of land cultivated, and to apply the same quantity or even more fertilizer per acre to the reduced area. We also recommend that high-grade fertilizers be used,

THE APPLICATION OF FERTILIZERS—(Continued)

for in the end they are cheapest. The overhead or general expenses which must be added on to a ton that sells for \$30 or \$40 are no greater in amount than must be added on to a ton that sells for \$15. The cost of preparation, bags, freight, etc., is the same in each case.

We make this recommendation not so much to increase our sales as to increase **your** profits. There are farmers who apply from 1,500 to 2,000 pounds of high-grade fertilizer to an acre of potatoes—fertilizer that is twice or three times as rich as that used in some other sections of the country. As a result, coupled with thorough cultivation, they grow 300 bushels of potatoes to the acre. Is not the unit cost of a bushel of potatoes much less when 300 bushels are grown on **one** acre than when they are grown on **three** or **six** acres?

Successful manufacturers seek to reduce unit cost, and to that end they

seek by modern methods and machinery to increase the production of their factories. We believe it would pay farmers, in order to reduce the unit cost of a bushel of potatoes or a bushel of wheat, to cover less land and to cultivate it better, using not only more fertilizer per acre, but a higher quality. The average yield of wheat in the United States is 14 bushels per acre, and yet there are farmers getting 30 and 35 bushels per acre. The average yield of corn is less than 30 bushels per acre, and yet there are farmers in the East who, on what would be regarded in the West as barren land, by the application of 1,000 pounds of "AA" QUALITY fertilizer and good cultivation, are harvesting 75 and 100 bushels of shelled corn per acre. It is obvious that where we intensify the treatment, that is, enrich and cultivate better, we can materially reduce the labor cost as well as increase production.



COMEDY AND COMMON SENSE

Inside Information

"Father," asked little Rollo, "what is appendicitis?"

"Appendicitis, my son," answered the deep-thinking father, "is something that enables a doctor to open up a man's anatomy and remove his entire bank account."

—o—

Honey in the Comb

Little Robert, aged nine, had been bathing in the Abenakis River all through the dog days. His liver was waterlogged and he was off his feed. His mother, being anxious, asked:

"Could you eat honey in the comb, Bob?"

The lad lifted his big brown eyes to his mother's face and answered:

"Could I? Why I could eat it in a hair brush."

—o—

The Kiss

A kiss is a peculiar proposition.
Of no use to one, yet absolute bliss to two.

The Small Boy gets it for nothing—

The Young Man has to steal it—

And the Old Man has to buy it—

It is the Baby's right—

The lover's privilege—

The Hypocrite's mask.

To the Young Girl it is Faith;

To the Married Woman Hope,

And to the Old Maid Charity.

—o—

Before marriage a man will go home and lie awake all night thinking about something you said; after marriage he'll go to sleep before you finish saying it."

—o—

Some men are like automobiles. They require an "accelerator" to speed them up.

And other men are like wheelbarrows. They need some one to "take them in hand."

And still other men are like aeroplanes. They should have a "stabilizer" to make them "safe."

—o—

"You must know a lot about hens, if you raise them. Perhaps you can explain this to me. The other day I saw a hen very busy eating carpet tacks in my back yard. Why was she eating tacks?"

"I don't know unless she was thinking of laying a carpet."

"Prayer of the Horse"

[Translated from the Swedish, in "Our Dumb Animals."]

To thee, my master, I offer my prayer: "Feed me and take care of me. Be kind to me. Do not jerk the reins; do not whip me when going up hill.

"Never strike, beat or kick me when I fail to understand what you want of me, but give me a chance to understand you.

"Watch me, and if I refuse to do your bidding, see if there is not something wrong with my harness.

"Do not give me too heavy loads. Never hitch me where water will drip on me. Keep me well shod. Examine my teeth when I fail to eat. I may have an ulcerated tooth. That, you know, is very painful. I am unable to tell you in words when I am sick; so watch me and I will try to tell you by signs.

"Pet me sometimes; I enjoy it and I will learn to love you.

"Protect me in summer from the hot sun. Keep a blanket on me in winter weather, and never put a frosty bit in my mouth, but hold it in your hands a moment first.

"I carry you, pull you, wait patiently for you long hours, day or night. I cannot tell you when I am thirsty, give me clean, cool water often in hot weather.

"Finally, when my strength is gone, instead of turning me over to a human brute, to be tortured and starved, take my life in the easiest and quickest way, and your God will reward you in this life and in Heaven. Amen."

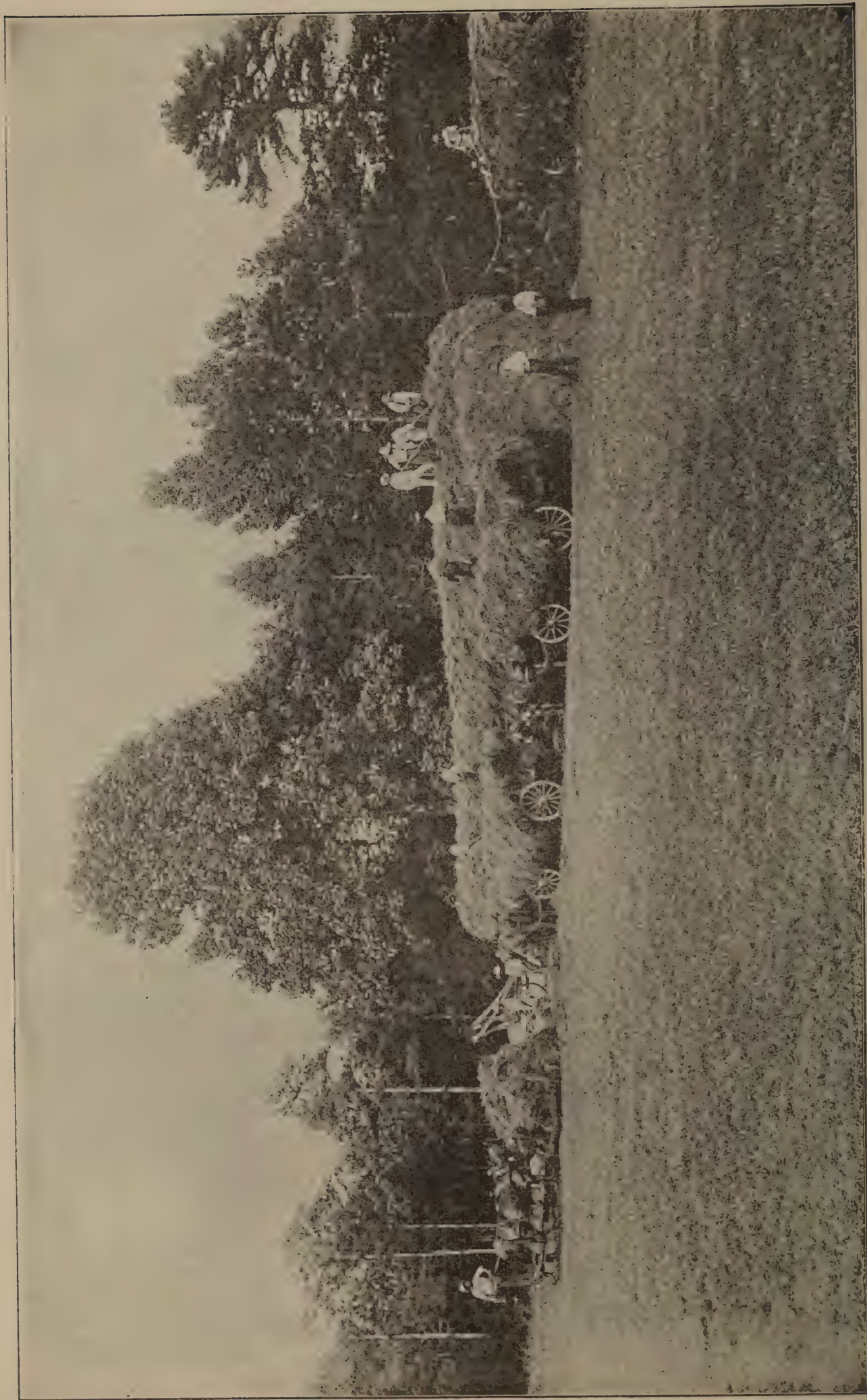
—o—

"Fine old inn, sir," commented the host. "Everything in this house has a story.

"I don't doubt," remarked the grumpy tourist. "And is there any legend connected with this old piece of cheese?"

—o—

There are two kinds of religion—the kind you automatically get out of a book and the kind you systematically practice out of your heart. The former isn't worth standing room in heaven.



Alfalfa harvest on the farm of Mrs. J. M. Cherry, Rock Hill, South Carolina.

WEIGHTS AND MEASURES

APOTHECARIES' WEIGHT.

20 grains	1 scruple
3 scruples	1 dram
8 drams	1 ounce
12 ounces	1 pound
The ounce and pond in this are the same as in Troy Weight.	

AVOIRDUPOIS WEIGHT.

27 11-32 grains	1 dram
16 drams	1 ounce
16 ounces	1 pound
25 pounds	1 quarter
4 quarters	1 hundredweight
2,000 pounds	1 short ton
2,240 pounds	1 long ton

CIRCULAR MEASURE.

60 seconds	1 minute
60 minutes	1 degree
30 degrees	1 sign
90 degrees	1 quadrant
4 quadrants, 12 signs, or 360 degrees	1 circle

CLOTH MEASURE

2¼ inches	1 nail
4 nails	1 quarter
4 quarters	1 yard

CUBIC MEASURE.

1,728 cubic inches	1 cubic foot
27 cubic feet	1 cubic yard
128 cubic feet	1 cord (wood)
40 cubic feet	1 ton (shipping)
2150.42 cubic inches	1 standard bushel
268.8 cubic inches	1 standard gallon
1 cubic foot	about 4/5 of a bushel

DRY MEASURE.

2 pints	1 quart
8 quarts	1 peck
4 pecks	1 bushel
36 bushels	1 chaldron

LIQUID MEASURE.

4 gills	1 pint
2 pints	1 quart
4 quarts	1 gallon
31½ gallons	1 barrel
2 barrels	1 hogshead

LONG MEASURE.

12 inches	1 foot
3 feet	1 yard
5½ yards	1 rod
40 rods	1 furlong
8 furlongs	1 statute mile
3 miles	1 league

MARINERS' MEASURE.

6 feet	1 fathom
120 fathoms	1 cable length
7½ cable lengths	1 mile
5,259 feet	1 statute mile
6,085 feet	1 nautical mile

MISCELLANEOUS.

3 inches	1 palm
4 inches	1 hand
6 inches	1 span
18 inches	1 cubit
21.8 inches	1 Bible cubit
2.5 feet	1 military pace

SQUARE MEASURE.

144 square inches	1 square foot
9 square feet	1 square yard
30¼ square yards	1 square rod
40 square yards	1 rood
4 roods	1 acre
640 acres	1 square mile

SURVEYOR'S MEASURE.

7.92 inches	1 link
25 links	1 rod
4 rods	1 chain
10 square chains or 160 square rods	1 acre
640 acres	1 square mile
36 square miles (6 miles square)	1 township

TROY WEIGHT.

24 grains	1 pennyweight (pwt.)
20 pwt.	1 ounce
12 ounces	1 pound
Used for weighing gold, silver and jewels.	

PAPER MEASURE.

24 sheets	1 quire
20 quires	1 ream (480 sheets)
2 reams	1 bundle
5 bundles	1 bale

TIME MEASURE.

60 seconds	1 minute
60 minutes	1 hour
24 hours	1 day
7 days	1 week
28, 29, 30 or 31 days	1 calendar month
30 days	1 month in computing interest
365 days	1 year
366 days	1 leap year

CONVENIENT LAND MEASURES.

10 rods by 16 rods	1 acre
8 rods by 20 rods	1 acre
5 rods by 32 rods	1 acre
4 rods by 40 rods	1 acre
5 yards by 968 yards	1 acre
10 yards by 484 yards	1 acre
20 yards by 242 yards	1 acre
40 yards by 131 yards	1 acre
220 feet by 198 feet	1 acre
110 feet by 396 feet	1 acre
60 feet by 726 feet	1 acre
120 feet by 363 feet	1 acre
300 feet by 145.2 feet	1 acre
400 feet by 108.9 feet	1 acre

WEIGHTS OF EVERYDAY THINGS.

A barrel flour weighs	196 lbs.
A barrel salt weighs	280 lbs.
A barrel beef weighs	200 lbs.
A barrel pork weighs	200 lbs.
A barrel fish weighs	200 lbs.
A keg of powder equals	25 lbs.
A stone of lead or iron equals	14 lbs.
A pig of lead or iron equals	21½ stone
Anthracite coal, broken—cubic foot averages	54 lbs.
A ton loose occupies	40-43 cubic feet
Bituminous coal, broken—cubic foot averages	49 lbs.
A ton loose occupies	40-48 cubic feet
Cement hydraulic Rosendale, weight per bushel	70 lbs.
Cement hydraulic, Louisville, weight per bushel	62 lbs.
Cement hydraulic Portland, weight per bushel	96 lbs.
Gypsum, ground, weight per bushel	70 lbs.
Lime, loose, weight per bushel	70 lbs.
Lime, well shaken, weight per bushel	80 lbs.
Sand at 98 lbs. per cu. ft., per bushel	122½ lbs.
18.29 bushels equals a ton.	1,181 tons cubic yard.

HOUSEHOLD HINTS

Vegetable Marmalades When Fruit Is Scarce

When fruit is scarce and high vegetables from the garden may be used to make marmalade. These combinations of vegetables, sugar and fruit acids are delicious as a spread for bread or to serve with meats. The following recipes will make about one quart of marmalade:

Flame-Colored Marmalade

- 4 cups of ground carrots.
- 3 cups of sugar.
- 4 lemons.
- 4 teaspoons ground ginger root.

Cook the carrots until tender and add the sugar. Peel, quarter and cut the lemons into thin slices, removing the seeds. Cook slowly with the carrots until thick. Do not stir except to keep from burning. Pack in hot, freshly sterilized jars, and boil for 5 minutes in a hot water bath, or process 10 minutes in hot steam.

Dixie Marmalade

- 2 cups of ground carrot.
- 1½ cups of chopped green sweet pepper.
- 2 lemons.
- 2 cups of rhubarb (cut in small pieces and unpeeled).
- 2 cups of sugar.
- Ginger root if desired.

Make according to directions for Flame Colored Marmalade.

Ripe Tomato Marmalade

- 2 dozen medium-sized tomatoes.
- 3 lemons.
- 3½ cups of sugar.

Peel and slice the tomatoes thin, remove as many seeds as possible, and make according to directions for Flame-Colored Marmalade.

Ripe Tomato and Carrot Marmalade

- 2 cups of ground carrot.
- 4 cups of ripe, cooked tomato.
- 3 cups of sugar.
- 2 lemons.
- 2 teaspoons of ground horseradish.
- 2 teaspoons of ginger.
- 2 teaspoons of vinegar.

Place the ginger in a cheesecloth bag and make according to directions for Flame-Colored Marmalade. — United States Department of Agriculture.

For Cleaning Various Substances

Alabaster—Use strong soap and water.

Black Silk—Brush and wipe it thoroughly, lay on table with the right side up; sponge with hot coffee strained through muslin; when partly dry, iron.

To Remove Stains or Grease from Oil Paint—Use bisulphate of carbon spirits of turpentine, or if dry and old, use chloroform. These and tar spots can be softened with olive oil and lard.

Stain, Iron Rust, or Ink from Velum or Parchment—Moisten the spot with a solution of oxalic acid. Absorb same quickly by blotting paper or cloth.

Rust from Steel—Take half ounce of emery powder mixed with one ounce of soap and rub well.

Fruit Spots from Cottons—Apply cold soap, then touch the spot with a hair pencil or feather dipped in chlorate of soda, then dip immediately in cold water.

Grease from Silks—Take a lump of magnesia, rub it wet on the spot, let it dry, then brush the powder off.

Iron Rust may be removed from white goods by sour milk.

Scorch Stains from White Linen—Lay in bright sun.

Mildew—Moisten the spot with clean water; rub on it a thick coating of castile soap mixed with chalk scrapings; rub with end of finger, then wash off.

Oil Marks on Wall Paper—Apply paste of cold water and pipe clay, leave it on all night, brush off in the morning.

Paint Spots from Clothing—Saturate with equal parts turpentine and spirits of ammonia.

To Cleanse Wall Paper—Rub with flannel cloth dipped in oatmeal.

Black Cloth—Mix one part of spirits of ammonia with three parts warm water, rub with sponge or dark cloth, clean with water, rub with the nap.

Furniture, for Finger Marks—Rub with a soft rag and sweet oil.

Chromos—Go over lightly with a damp linen cloth.

Zinc—Rub with a piece of cotton cloth dipped in kerosene, afterwards with a dry cloth.

Help in Case of Accident

Drowning. 1.—Loosen clothing if any. 2.—Empty lungs of water by laying body on its stomach and lifting it by the middle so that the head hangs down. Jerk the body a few times. 3.—Pull tongue forward using handkerchief, or pin with string, if necessary. 4.—Imitate motion of respiration by alternately compressing and expanding the lower ribs, about twenty times a minute. Alternately raising and lowering the arms from the sides up above the head will stimulate the action of the lungs. Let it be done gently but persistently. 5.—Apply warmth and friction to extremities. 6.—By holding tongue forward, closing the nostrils and pressing the "Adam's apple" back (so as to close entrance to stomach), direct inflation can be tried. Take a deep breath and breathe it forcibly into the mouth of the patient, compress the chest to expel the air and repeat the operation. 7.—**DON'T GIVE UP.** People have been saved after hours of patient, vigorous effort. 8.—When breathing begins, get patient into a warm bed, give warm drinks, or spirits in teaspoonfuls, fresh air and quiet.

Burns and Scalds. Cover with cooking soda and lay wet cloths over it. Whites of eggs and olive oil, olive or linseed oil, plain, or mixed with chalk or whiting.

Lightning. Dash cold water over a person struck.

Sunstroke. Loosen clothing. Get patient into shade, and apply ice-cold water to head.

Mad Dog or Snake Bite. Tie cord tight above wound. Suck the wound and cauterize with caustic or white-hot iron at once, or cut out adjoining parts with a sharp knife.

Venomous Insects' Stings, &c. Apply weak ammonia, oil, salt water, or iodine.

Fainting. Place flat on back; allow fresh air, and sprinkle with water.

Tests of Death. Hold mirror to mouth. If living, moisture will gather. Push pin into flesh. If dead the hole will remain, if alive it will close up.

Cinders in the Eye. Roll soft paper up like a lamp-lighter and wet the tip to remove, or use a medicine-dropper to draw it out. Rub the other eye.

—o—

It Takes Grit

"Couldn't you put up a bluff?"

"No. I haven't the sand."

Cleaning a Panama Hat

Would you like to know how to clean a Panama hat? Here is an excellent method: Fill a bowl with hot water and put into this enough shredded soap to make a good lather. Let this cool, then put the hat into the water and with an old nail brush gently scrub it all over. Then rinse the hat well in a bowl of clean, cold water, in which just a little cream of tartar has been dissolved. When this is finished, put the hat in the open air to dry but not in the sun.

—o—

Instructions for Washing Your Car

Owing to time required for varnish to harden, great care should be exercised in washing the car during the first few months in use.

Before using new sponges and chamois skins clean them thoroughly with soap and water to remove sand and shells.

Clean one panel at a time, thoroughly drying before cleaning the next. Never wash the engine hood while hot and never use hot water on any part of car.

Mud should never be allowed to dry upon a newly varnished surface. Wash off all mud as soon as possible.

Use lots of water to clean your car. A sponge, thoroughly saturated, is much better than a hose. Always have sponge full of clear, fresh water and use no pressure when applying.

Have two sponges, one for body, hood, etc., the other for the running gear. Keep sponge for body away from grease.

In washing running gear use a soap solution made by dissolving in a pail of water sufficient soap to make a good suds. Sop onto car with sponge. Rinse immediately with clear water.

If necessary to use soap on body, use only pure soap such as imported Castile, or the very best oil soap made for use on automobiles. There must be no free alkali or acids in the soap, as these will eat the surface of the varnish.

—o—

Timely Hint

The average farm implement is only about half worn out by use alone. The rest of the wear is due to rust and decay. Make the greatest possible profit out of machinery by using it continuously for profitable work until it is worn out.

ANIMAL DISEASES AND THEIR REMEDIES

- ABSCCESS**—Hot poultices; incision; antiseptic washes.
- BIG JAW**—Cut out tumor. Give potassium iodide for a week in daily doses of 1 to 2 drams, then another week after an interval of a week.
- ANEMIA**—Better diet; iron; gentian, or cod liver oil.
- APPETITE, LOSS OF**—Change diet; gentian and other tonics.
- AZOTURIA**—Light feeds when not at work; Epsom salts; soda; aloes.
- BITES OF INSECTS**—Ammonia.
- BOTS IN HORSES**—Cathartics; carbon sulphide in gelatine capsules.
- BOG SPAVIN**—Rest; high-heeled shoe; blister; cold water.
- BONE SPAVIN**—Same treatment as for bog spavin; actual cautery if necessary.
- BROKEN WIND** — Linseed meal; strychnine.
- BRONCHITIS**—Warm blankets, mustard poultice; nitre; aconite; belladonna.
- BURNS**—Cover with a 2 per cent. solution of carbolic acid in linseed oil or vaseline.
- CAPPED HOCK**—Hot and cold applications; blister.
- COLIC**—Laudanum, chloral hydrate, cannabis, indica, or soda, change diet.
- CONSTIPATION**—Linseed oil, aloes, or castor oil.
- CONVULSIONS**—Chloral hydrate or bromide of potash.
- CURB**—Hot application; blister; high heeled shoe.
- DIARRHOEA**—Linseed oil and laudanum; boiled linseed jelly.
- DISTEMPER**—Good diet; quinine; strychnine, belladonna; dry quarters.
- DYSENTERY**—Calomel; opium; creolin.
- ECZEMA**—Tar, ichthyol, iodine, or boric acid.
- ENTERITIS**—Linseed oil; laudanum, chloral hydrate.
- FEVER**—Aconite, acetanilid, quinine or nitre.
- FLATULENCE**—Stomach tube; charcoal, soda, or chloroform.
- FLEAS**—Wash with creolin or carbolic soap.
- FOOT ROT**—Remove loose tissue; apply tar, blue vitrol, or other antiseptic.
- FOUNDER**—Cold applications; poultices; aconite.
- FROST BITE**—Ichthyol; oil of turpentine.
- GARGET**—Hot applications; belladonna or gum camphor ointment.
- GASTRITIS**—Opium; lime water; subnitrate of bismuth.
- HEAVES**—Moisten the food; give Fowler's solution of arsenic.
- HEMORRHAGE**—Ice; opium; ergot or iron salts.
- HERPES**—Apply lead acetate, iodine, silver nitrate or creolin.
- INFLUENZA**—Inhalation of carbolic acid fumes in steam; nitre; quinine, or belladonna.
- KNUCKLING**—Attention to shoeing.
- LICE** — Kerosene, creolin, lysol, whitewash.
- MANGE**—Dip sheep and cattle in a lime-sulphur wash, or spray them with a crude oil emulsion. Use carbolic soap, creosote, or creolin on dogs.
- MEGRIMS**—Rest, laxatives.
- MILK FEVER**—Pump udder full of air, or inject the udder with a solution of iodide of potash, creolin or lysol.
- POISONING**—For plant poisoning, give potassium permanganate and aconite or atropine, according to symptoms. For mineral poisoning, give linseed oil, lard, or milk, followed by laudanum or a stimulant, according to symptoms.
- PNEUMONIA**—Avoid drafts, give nitre, aconite digitalis.
- QUARTER CRACK**—Draw crack together, fasten with nails, apply tar.
- RHEUMATISM**—Apply stimulating lotions, give salicylic acid and bicarbonate of potash.
- RICKETS**—Better diet, cod liver oil, lime water.
- RINGBONE**—Rest, blister, cautery, neurotomy.
- RINGWORM**—Iodine, silver nitrate, creolin, carbolic acid.
- ROARING**—Surgical operation removing the aryte-noid cartilage.
- SADDLE GALLS** — Cleanse, apply antiseptic washes.
- SAND CRACK**—Bind hoof, apply tar ointment.
- SCAB**—(see MANGE).
- SORES**—Cleanse, open, apply antiseptics.
- SPAVIN**—(see BOG and BONE SPAVIN).
- SPLINT**—Rest, cold applications, blister.



The Virginia Truck Experiment Station at Norfolk, Va. Field of cabbage.

HELPFUL HINTS FOR THE CARE OF AUTOMOBILES AND TRUCKS

Dont's for All Motor Car Owners

DON'T drive fast the first 500 miles. The bearings are fitted tight—they need working in. It is advisable to keep under 20 miles an hour the first 200 miles and under 25 miles an hour the next 300 miles.

DON'T forget to go over your car after the first 200 or 300 miles and see that all nuts and bolts are tight. Such inspections should be made from time to time as you continue to use your car, if you are to count on maximum service.

DON'T forget to keep oil in your motor and grease in your grease cups, and don't forget to **STUDY THE OILING CHART**. Oiling not only prevents excessive wear but reduces friction and saves gasoline.

DON'T forget your spark lever. Learn to use it; it is mounted on the wheel for a purpose. Failure to retard spark under heavy pulls results in undue wear on motor bearings. Failure to advance spark at high speeds results in inefficiency and may heat motor.

DON'T forget to keep the radiator filled with **CLEAN** water. Dirty water will clog the circulatory system.

DON'T forget to put alcohol or some good anti-freeze in your radiator in freezing weather.

DON'T store your car in winter without first taking out the battery and leaving it at a battery station, or without taking precautions to see that battery is recharged regularly about every three weeks. Batteries gradually discharge even when not in use, and when discharged or nearly so, freeze, and jars break as a result.

DON'T keep your car in a stable or barn exposed to fumes of ammonia, as the varnish will turn dull.

DON'T forget to keep your tires inflated to the proper pressure. A pressure gauge will help you. The tire manufacturer's guarantee of service is conditioned upon proper inflation.

Care of Tires

The average motorist, despite his constant endeavor to decrease his tire upkeep cost, frequently overlooks one

of the most important long mileage factors, according to some of the tire experts of Akron, where most of the tires are manufactured. Rim neglect, they say, is just as serious a tire menace as low-grade rubber or defective fabric.

Inasmuch as most discussions concerning tire conservation deal largely with the tire itself, one of the larger rubber companies is sending out a statement concerning the rim situation. It is pointed out that bent, loose, creeping and rusty rims are conditions that the tire consumer must always guard against.

"A bent rim, for example, has ruined many tires under 500 miles of service when that same tire would have run six or seven thousand miles if proper attention had been paid to the rim," reads the statement, which is being sent out by the Miller Rubber Company. "The bend in the rim caused a break in the tire just above the bead—such a break is most destructive and costly."

"Loose, demountable rims also cause a lot of tire trouble, if not watched carefully," continues the statement. "When one of the wedges becomes loose, the rim starts 'working' and gradually the other wedges become loose. A 'creeping' rim is the result and the valve stem bears the whole strain until it is finally pulled off. Furthermore, those wedges are often tightened up unevenly. This ends in what is referred to as a 'wobbly' tire, and the tread is worn down prematurely."

"At other times, motorists pound both the rim and the tire with a hammer to get the rim off or on. The pounding of the rim doesn't do any particular harm, unless it bends the rim, but every blow on the tire may cause a fabric to break, and that is very serious."

"Rusty rims are dangerous because they corrode tubes, make it hard to change tires and sometimes result in 'freezing on' of the tire. Rims should be cleaned at least once every six months. Ordinary paint sometimes placed on the rims after the cleaning process is not good practice inasmuch as the heat generated by the tires melts the paint and the tire sticks to the rim. Graphite is much better for this purpose."



A well-fertilized field of tobacco.

HOW THIRTY FARMERS WON \$3,000

WITH

10 FULL ACRES OF CORN

50 FULL ACRES OF WHEAT

10 FULL ACRES OF POTATOES

On A. A. C. Fertilizers Exclusively

“They Weighed, They Measured, and They KNEW”

\$1,000 FOR TEN PRIZE CROPS OF
POTATOES

FIRST PRIZE CROP, 375 BUSHELs ON ONE ACRE

The Ten Prize Winners TREBLE THEIR STATE YIELDS

			Yield
First	\$100.00	Elmer L. Powers, Vienna, Mich.....	375 bushels
Second	100.00	E. W. Lincoln, Montcalm, Mich.....	354.23 bushels
Third	100.00	George Chapman, Attica, Mich.....	345.25 bushels
Fourth	100.00	A. F. Wallbrecht, Central Lake, Mich.....	339 bushels
Fifth	100.00	Edwin A. Starr, Royal Oak, Mich.....	335.88 bushels
Sixth	100.00	Daniel Reish, Wales, Mich.....	330.58 bushels
Seventh	100.00	Jno. H. Linck, Goodland, Mich.....	323.08 bushels
Eighth	100.00	Jennings Sparling, Colfax, Mich.....	305 bushels
Ninth	100.00	Frank Brown, Waupun, Wis.....	304.15 bushels
Tenth	100.00	Floyd I. Faunce, Summerfield, Mich.....	301.23 bushels

Average yield obtained by the prize winners.....331.3 bushels
Average yield, Indiana, Wisconsin, and Michigan...110 bushels
Average yield, United States, 1914.....109.6 bushels

\$1,000 FOR TEN PRIZE CROPS OF WHEAT

THE FOLLOWING ARE THE WINNERS

Every One Trebled the United States Yield

			Yield
First	\$100.00	P. P. Suter, Waterville, Ohio.....	59.86 bushels
Second	100.00	Dewey Hanes, Arcanum, Ohio.....	55.77 bushels
Third	100.00	J. K. Spitler & Sons, Bloomville, Ohio.....	52.40 bushels
Fourth	100.00	George H. Zechman, Republic, Ohio.....	48.60 bushels
Fifth	100.00	Charles Klick, Massillon, Ohio.....	47.65 bushels
Sixth	100.00	W. C. Gregg, Sycamore, Ohio.....	47.37 bushels
Seventh	100.00	Marshall T. Smith, Mt. Gilead, Ohio.....	45.62 bushels
Eighth	100.00	George H. Sands, Milan, Ohio.....	43.50 bushels
Ninth	100.00	C. C. Schild, Havana, Ohio.....	42.30 bushels
Tenth	100.00	Adam Giessler, Wren, Ohio.....	42.03 bushels

Average yield obtained by the prize winners.....	48.5	bushels
Ohio average yield.....	16.2	bushels
United States average yield.....	14.8	bushels

\$1,000 FOR TEN PRIZE CROPS OF CORN

First Prize Crop, 115 Bushels Shelled Corn on One Acre

In Spite of a Poor Corn Season These Men Nearly Trebled Their State Yield
and Nearly Quadrupled the United States Yield

GOOD WORK AND GOOD AGRICULTURE.

THEIR NAMES

			Yield
First	\$100.00	R. E. McAhren, St. Paul, Ind.....	115 bushels
Second	100.00	P. P. Pope, Tontogany, Ohio.....	108 bushels
Third	100.00	O. L. Hart, Greenville, Ohio.....	104.5 bushels
Fourth	100.00	W. A. Groshans, Hamlet, Ind.....	103.5 bushels
Fifth	100.00	Norris McHenry, Elizabethtown, Ind.....	93 bushels
Sixth	100.00	W. A. Withrow, New Richmond, Ind.....	91.7 bushels
Seventh	100.00	Calvin Collier, Bellevue, Ohio.....	91.5 bushels
Eighth	100.00	W. A. Westfall, Poseyville, Ind.....	89.9 bushels
Ninth	100.00	Valentine Bender, Poseyville, Ind.....	87.1 bushels
Tenth	100.00	William Frederick, Corydon, Ind.....	82.5 bushels

Average yield obtained by the prize winners.....	96.74	bushels
Average yield, Ohio and Indiana.....	36	bushels
Average yield, United States, 1914.....	25.8	bushels

A TRIBUTE TO THE STOCKMAN

By H. W. MUMFORD,

Professor of Animal Husbandry, University of Illinois

Behold the Stockman!
Artist and Artisan.

He may be polished, or a
diamond in the rough—
but always a gem.

Whose devotion to his ani-
mals is second only to his
love of God and family.

Whose gripping affection is
tempered only by his in-
born sense of the true pro-
portion of things

Who cheerfully braves per-
sonal discomfort to make
sure his live stock suffer
not.

To him there is rhythm in
the clatter of the horse's
hoof, music in the bleating
of the sheep and in the
lowing of the herd.

His approaching footsteps
call forth the affectionate
whinny of recognition.

His calm, well - modulated
voice inspires confidence
and wins affection.

His coming is greeted with
demonstrations of pleas-
ure, and his going with
evident disappointment.

Who sees something more
in cows than the drudgery
of milking, more in swine
than the grunt and squeal,
more in the horse than the
patient servant, and more
in sheep than the golden
hoof.

Herdsmen, shepherd, groom
—yes, and more. Broad-
minded, big-hearted, whole-
souled; whose life and
character linger long after
the cordial greeting is
stilled and the hearty
handshake is but a mem-
ory; whose silent influence
forever lives. May his kind
multiply and replenish the
earth.

CALENDAR FOR 1920.

ECLIPSES.—Standard Time.

In the year 1920 there will be four Eclipses, two of the Sun and two of the Moon.

I.—A Total Eclipse of the Moon, May 2. Visible to the West Indies, South America, Europe and Africa. The beginning will also be visible to eastern North America and western Asia, and the ending to North America except the extreme north-western part.

II.—A Partial Eclipse of the Sun, May 18. Invisible to the United States. Visible to Australia except the extreme northern and north-eastern portions.

III.—A Total Eclipse of the Moon, October 27. Visible to Australia and the Philippine Islands. The beginning visible generally to western North America, and Asia, except the western portion; the ending visible generally to Asia, eastern Africa, and Europe, except the western portion.

IV.—A Partial Eclipse of the Sun, November 10. Visible to the north-eastern part of North America north of a line drawn through Little Rock, Ark., and Denver, Col., the south-western part of Europe, and the north-western corner of Africa.

THE TWELVE SIGNS OF THE ZODIAC.



THE SEASONS.

Eastern Time

Vernal Equinox (Spring begins).....	March 20 d. 4 h. 59 m. P. M.
Summer Solstice (Summer begins).....	June 21 d. 0 h. 40 m. P. M.
Autumnal Equinox (Autumn begins).....	Sept. 23 d. 3 h. 29 m. A. M.
Winter Solstice (Winter begins).....	Dec. 21 d. 10 h. 17 m. P. M.

MORNING AND EVENING STARS.

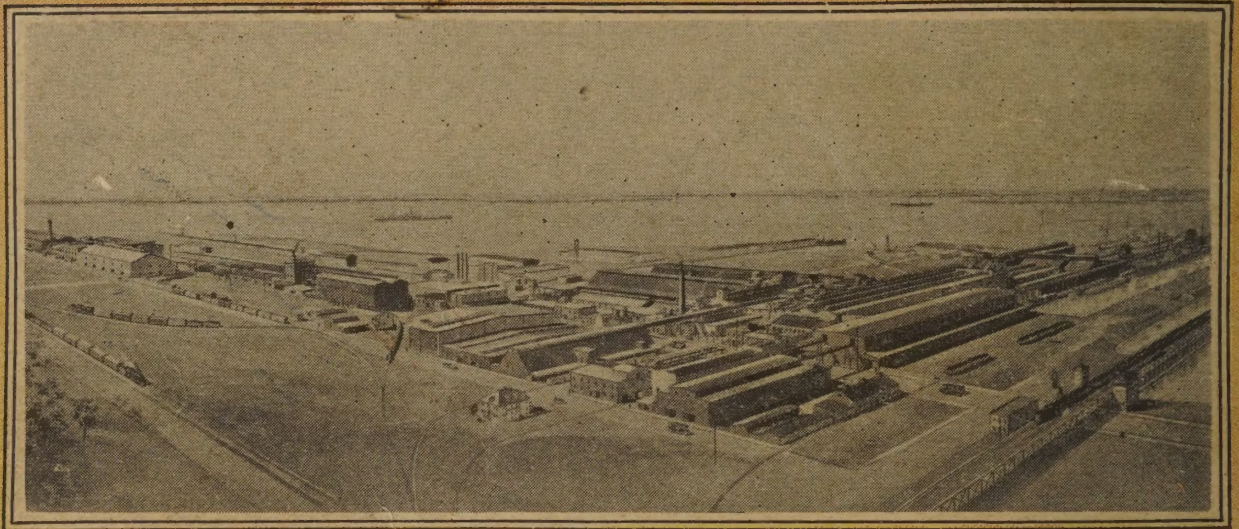
Mercury (♿) will be Evening Star about March 3, June 29, and October 25; and Morning Star about April 17, August 14, and December 3.

Venus (♀) will be Morning Star till July 3, and then Evening Star the rest of the year.

Jupiter (♃) will be Morning Star till February 3; then Evening Star till August 22; and then Morning Star again the rest of the year.

ASTRONOMICAL CHARACTERS.

☉ Sun.	♃ Jupiter.	☾ Runs high.	♊ Ascending Node.	☾ Apog., far from ☉
♁ Earth.	♄ Saturn.	☾ Runs low.	♋ Descending Node.	☾ First Quarter.
☿ Mercury.	♅ Uranus.	♌ Opposition.	♌ Node.	☾ Full Moon
♀ Venus.	♆ Neptune.	♍ Conjunction	♌ Perigee, near ☉	☾ Last Quarter.
♂ Mars.	☾ Moon.	☐ Quadrature		☾ New Moon.



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